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IMPERIAL IRRIGATION DISTRICT

ANNUAL REPORT BY THE PRESIDENT OF THE BOARD OF DIRECTORS

JANUARY 1, 1948

1947

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DIRECTORS

Evan T. Hewes, President of the Board
Charles Morrow Mack Trentham
E. F. Grubel Ollie Stewart
- - - - -

ASSESSOR-COLLECTOR

W. A. McFadden

SECRETARY

G. L. Dermody

TREASURER

Anna T. McManus

El Centro, California
January 1, 1948

To the
Board of Directors and
All Persons Interested in
Imperial Irrigation District

As President of the Board of Directors, it is my privilege to submit a review of District operations and progress for the year ending December 31, 1947.

In this brief resume I will attempt to cover the important events of the following phases of District operations:

- I. Financial:
 - (a) Statement of conditions
 - (b) 1946-47 assessment
 - (c) Assessor-Collector's office
 - (d) Treasurer's office
 - (e) Auditors' report
- II. Operation and Maintenance of Water Distribution System:
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FOREWORD

The personnel of the Board and the elective officials remain unchanged from the preceding year.

Mr. Noel Pike, Chief Electrical Engineer, resigned during the year and his duties were divided between Mr. Fred Hesse and Mr. C. H. Youngstrom. Mr. Hesse was promoted to Chief Operating Engineer, and Mr. Youngstrom to Chief Design Engineer. Mr. T. T. Parker, Commercial Power Superintendent, also resigned and Mr. Bill Post, General Superintendent, Coachella Area, was promoted to fill the vacancy left by Mr. Parker. Mr. R. V. Rindernager joined the District as General Superintendent of the Coachella Area following Mr. Post's promotion. Mr. Rindernager was previously employed by Southern Nevada Power and Telephone Company in Las Vegas, and he will be a valuable addition to the District organization. Mr. C. H. Lindley resigned as Business Manager and was appointed adviser to the Business Manager. Vanessa Jeffries, Assistant Business Manager, was promoted to fill the vacancy left by Mr. Maddux.

The District's 1945 Power Project was advanced during the year by letting contracts for the major part of the equipment needed for construction of the steam plant. Construction work was formally inaugurated at the steam plant site on November 5, with the excavation work for the powerhouse beginning at 9:30 A. M. of that date.

The problem of obtaining experienced personnel remained a handicap to operations but the acquiring of material eased up to some extent. Sufficient new transportation and field equipment were secured to place these fleets in near normal condition.

The serious handicap of overcrowded working conditions for office personnel is unchanged, and we are hopeful that both material and man power will be available to the extent that work on the first wing of a new administration building can be started in Imperial during the coming year. Reserve funds that have been established and are being carried in irrigation operating funds are available to defray costs of this improvement, as well as other major improvements to the irrigation system.

Two of the most important developments of the year resulted from meetings with representatives of the Office of the Secretary of the Interior, Secretary of State, and the Department of Justice to discuss the procedure to be followed by the Federal government in carrying out the provisions of the Mexican Water Treaty involving District facilities, such as the All-American Canal, Pilot Knob power plant site and other properties located at Andrade. At the close of a two-day conference, it was suggested that the District submit any plan it might have to the Secretary of State for consideration. This was done toward the end of the year.

The other was what could be termed a meeting of minds of District officials with Bureau of Reclamation personnel on interpretation of a formula to carry out the provisions of the All-American Canal contract pertaining to the payment of net proceeds from power development of the All-American Canal to the United States.

Another major objective in Imperial Irrigation District a long campaign to obtain its All-American Canal contract rights from the United States was recorded on February 28, when the District took over the care, operation and maintenance of the main All-American Canal to Imperial Valley below Pilot Knob.

1. FINANCIAL

(a) Statement of Condition:

The following table, prepared by Treasurer Carl E. Arnette, shows the changes that took place in the District's long-term indebtedness for the calendar year ending December 31, 1947:

BOND AND WARRANT INDEBTEDNESS

	Total Indebtedness Dec. 31, 1946	Retained	Total Indebtedness Dec. 31, 1947
Warrants	\$ 538 000 00	\$538 000 00	
General Obligation Bonds	13 815 000 00		\$13 815 000 00
Power Revenue Bonds	14 642 000 00	327 000 00	14 969 000 00
	\$29 002 000 00	\$765 000 00	\$29 767 000 00

NOTE: \$97,815.00, First Refunding Bonds and Warrants, not included in the above. Said bonds and warrants were called for retirement July 1, 1948, and funds set aside for their retirement.

The financial condition of the District at the close of the year reflected:

- (1) An increase of \$152,857 in pay rolls over last year, due to a general increase in salaries of ten cents per hour for hourly employees, and twenty-one dollars per month for monthly employees announced on May 1, 1947,
- (2) A decrease of \$53,290 in land sales over the previous year,
- (3) A decrease of \$102,181 in irrigation operating funds, and
- (4) A decrease of \$31,621 in power operating revenue funds.

Power sales reached a new high, but increased operating costs and a continued large scale maintenance program were able to offset the increase recorded.

The following reports reflect the financial position of the District's water (United States) and power divisions.

POWER DIVISION

	<u>1947</u>	<u>1946</u>	<u>1945</u>
1. Operating Revenue	\$ 3 072 664	\$ 17 361	
2. Operating Deductions	1 734 641	333 37	
3. Operating Income	\$ 1 338 043	133 34	
4. Other Income	52 404	21 17	
5. Gross Income	\$ 1 390 447	154 51	
6. Income Deductions	279 671		
7. Net Income, or Current Earned Surplus	<u>\$ 1 092 276</u>	154 51	
1a. Current Assets	\$ 1 611 522	243 532	
2a. Investment and Fund Accounts	7 181 567		401 431
3a. Fixed Assets	12 981 923	1 534 631	
4a. Other Assets and Deferred Charges	139 227	13 630	
5a. Current Liabilities	575 510	68 107	
6a. Long-Term Liabilities	14 089 000		113 000
7a. Deferred Credits and Reserves	211 256	8 208	
8a. Surplus	6 244 191	1 092 276	

WATER DIVISION

(Accounts of Subsidiary Mexican Company not Included)

	<u>1947</u>	<u>Over 1946</u>	<u>Under 1945</u>
1. Operating Revenue	\$ 3 510 113	\$ 115 705	
2. Operating Deductions	2 073 082	209 197	
3. Operating Income	<u>\$ 1 437 031</u>		\$ 93 492
4. Other Income	41 955	10 949	
5. Gross Income	<u>\$ 1 478 986</u>		82 543
6. Income Deductions	481 648		8 723
7. Net Income, or Current Earned Surplus	<u>\$ 997 338</u>		73 818
1a. Current Assets	\$ 3 964 823		40 544
2a. Investment and Fund Accounts	1 888 923		232 143
3a. Fixed Assets	15 178 006	805 001	
4a. Other Assets and Deferred Charges	460 241		43 556
5a. Investment in Subsidiary Mexican Co.	7 945 399		
6a. Current Liabilities	658 341		91 136
7a. Long-Term Liabilities	14 002 815		353 070
8a. Deferred Credits and Reserves	1 659 525		62 721
9a. Surplus	13 116 716	995 687	

CASH AND FUND BALANCES
DECEMBER 31, 1947 AND DECEMBER 31, 1948

	<u>December 31 1947</u>	<u>December 31 1948</u>	<u>Initial Investment</u>
<u>IRRIGATION OPERATING FUNDS:</u>			
Cash Balances	\$ 2 272 139	\$ 2 436 183	\$ 100 000
Assessments Collected for Following Year	108 156	231 111	80 000
Total Fund Balances	\$ 2 379 915	\$ 2 667 294	\$ 180 000
<u>IRRIGATION BOND AND WARRANT FUNDS:</u>			
Cash Balances	\$ 620 937	\$ 888 196	\$ 248 000
Less Unpaid Matured Principal and Interest	(100 833)	(133 113)	-
Fund Balances	\$ 498 084	\$ 755 083	\$ 248 000
Assessments Collected for Following Year	188 180	181 005	-
Total	\$ 686 264	\$ 936 088	\$ 248 000
Less Int. Maturing Jan. 1 of Following Year	(235 188)	(141 662)	-
Less War. Maturing Jan. 1 of Following Year	-	(200 000)	248 000
Total Fund Balances	\$ 451 076	\$ 594 426	\$ 248 000
<u>DRAINAGE FUND:</u>			
Cash Balances	\$ 26 327	\$ 43 108	\$ 17 000
Assessments Collected for Following Year	111 043	115 711	660
Total Fund Balances	\$ 141 376	\$ 158 819	\$ 17 660
<u>MISCELLANEOUS IRRIGATION FUNDS:</u>			
Cash and Fund Balances	\$ 608 235	\$ 572 579	\$ 15 550
<u>COMPANIA OPERATING FUNDS: (1)</u>			
Compania General Fund	\$ 12 907	\$ 15 471	\$ 2 564
Compania Reserve Fund	80 420	53 977	26 113
Total Fund Balances	\$ 93 327	\$ 69 448	\$ 28 677
<u>POWER OPERATING REVENUE FUNDS:</u>			
Cash Balances	\$ 932 826	\$ 1 018 985	\$ 66 159
Due from Power Construction Fund	116 179	61 610	53 339
Fund Balances	\$ 1 049 005	\$ 1 080 595	\$ 119 498
<u>POWER BOND FUNDS:</u>			
Cash Balances	\$ 966 997	\$ 811 352	\$ 132 145
Less Unpaid Matured Bond Interest	(1 561)	(2 071)	110
Less Unpaid Interest Maturing Jan. 1 of Following Year	(203 212)	(207 420)	-
Less Unpaid Bonds Maturing Jan. 1 of the Following Year	(171 085)	(101 000)	71 112
Fund Balances	\$ 589 224	\$ 500 861	\$ 213 367
<u>MISCELLANEOUS POWER FUNDS:</u>			
Cash and Fund Balances	\$ 758 101	\$ 739 389	\$ 21 811
<u>POWER CONSTRUCTION FUNDS:</u>			
Cash Balances	\$ 1 435 109	\$ 1 581 535	\$ 100 000
Due Power Revenue Fund	116 179	61 610	53 339
Fund Balances	\$ 1 551 288	\$ 1 643 145	\$ 153 339
Assessments Collected for Following Year	\$ 321 313	\$ 301 412	\$ 11 111
Total Other Available Funds	\$ 1 872 601	\$ 1 944 557	\$ 164 450
GRAND TOTAL BALANCES	\$11 827 203	\$13 164 128	\$1 140 710

1. Decrease
2. Increase

1. Bonds of Southern Company in Lower California, Mexico

10 DECEMBER 1964

21 15 1

	Consolidated	Imperial Power Plant	Imperial Irrigation Service Co.	Comments at 7:00 AM, April 1941
Total Operating Revenue - Bro. Fwd.	\$6 769 397	\$3 072 661	\$3 512 123	\$332 123
<u>OPERATING REVENUE DEDUCTIONS:</u>				
<u>Operating Expenses:</u>				
Oper. & Maint. of Irrig. System	\$2 062 295		\$1 907 018	\$155 187
Oper. & Maint. of Power System:				
Production Expenses		\$ 233 529		
Power Purchased		321 353		
Transmission Expenses		4 304		
Distribution Expenses		358 031		
Accounting & Collecting Expenses		129 173		
Sales Promotion Expenses		11 402		
Administrative and Genl. Expenses		230 583		
Total Power Oper. and Maint.	1 334 778	\$1 334 778		
Expense of Tax Deed Land Sales and Rentals	24 271		21 271	
Uncollectible Accounts	4 064	3 000	1 064	
Losses on Sales & Retirement of Assets	30 981		30 981	
Employees' Group Insurance and Pension Expense	53 469		53 469	
Miscellaneous Expenses and Losses	4 081		2 299	1 782
Cost of Water Dehd. at Boundary (Inter-Div.)				(194 607)
Total Operating Expenses	\$3 513 839	\$1 337 778	\$2 019 122	\$351 546
Depreciation of:				
Equipment and Facilities	32 320		31 218	1 102
Buildings	19 222		18 017	1 205
Power System	335 796	335 796		
Amort. of Canal System and Defense Works, Mexico	145 555			145 555
Amort. of Plant Acquisition Adjustment	37 209	37 209		
Taxes	29 404	23 836	4 725	843
Total Operating Revenue Deductions	\$4 113 345	\$1 734 619	\$2 073 082	\$500 251
Net Operating Revenue	\$2 656 052	\$1 338 042	\$1 437 031	\$119 022*
<u>OTHER INCOME:</u>				
Int. on U. S. Bonds and Treasury Certs. and Notes	\$ 72 114	\$ 32 569	\$ 39 545	
Interest on Bank Deposits	2 364		2 364	
Interest - Miscellaneous	45		46	
Rental of Other Physical Property	836	836		
Total Other Revenue	\$ 75 359	\$ 33 405	\$ 41 955	
GROSS INCOME	\$2 731 412	\$1 371 447	\$1 478 986	\$119 022*
<u>INCOME DEDUCTIONS:</u>				
Interest on District Bonds	\$ 749 447	\$ 279 072	\$ 470 375	
Interest on District Warrants	4 225		4 225	
Amortization of Debt Discount	7 048		7 048	
Total Income Deductions	\$ 760 720	\$ 279 072	\$ 481 648	
NET INCOME - EARNED SURPLUS				
CURRENT YEAR	\$1 970 692	\$1 092 375	\$ 997 338	\$119 022*

*Deficit

2. FINANCIAL Continued

(b) 1946-47 Assessment:

Imperial Irrigation District continued in 1946-47 the annual assessment levy for the 1946-47 year at \$1.50 for each \$100.00 of assessed valuation. The new levy is the same as that imposed for each of the past three years, but is based on a slightly higher valuation. This increased valuation is due, largely, to return to District assessment rolls of tax base land.

The \$1.50 levy is based upon a net equalized valuation of \$33,471,540, an increase of \$46,277 over the 1945-46 figure of \$33,025,263, and is designed to raise a total of \$50,203,310, from which 55.48 per cent will be used for payment of interest and retirement of bonds and warrants, 12.83 per cent for drainage costs, and 31.69 per cent for operation costs.

(c) Assessor-Collector's Office:

Actual cash collections at the end of the year amounted to 65.4 per cent of the total assessment, as compared to 61 per cent and 59.2 per cent during the same period of the two preceding years. Ninety-six per cent of the total assessment had been paid by June 30, 1947, which was the delinquent date for the 1946-47 year. This left uncollected as of that date \$55,245, or 11 per cent, which is a reduction of .39 per cent under last year's previous low of 1.39 per cent. Percentage of delinquency at date of sale was 1.33, or .02 per cent more than the low of 1.31 recorded September 7, 1946. The latter situation remained satisfactory, and no difficulty was expected during the assessment period.

I. FINANCIAL (Continued)

(d) Treasurer's Office:

In addition to the general office work of the Treasurer's office, the following business was handled during the year 1947:

58,168 bonds, coupons, and warrants were paid, for which 771 checks were issued and involving an expenditure of	\$ 1 682 226 56
Cashier, pay roll, Comptroller pay roll, and expense checks amounting to 34,388 checks and involving an expenditure of	<u>5 964 882 21</u>
Total Expenditures	\$ 7 647 108 83

INVESTMENTS

Total U. S. Securities December 31, 1946	\$ 9 972 000 00
U. S. Securities Purchased in 1947	<u>830 000 00</u>
Total U. S. Securities	\$10 802 000 00
Less U. S. Securities Cashed in 1947	<u>1 200 000 00</u>
Total U. S. Securities December 31, 1947	\$ 9 602 000 00

INTEREST EARNED

Interest Earned on U. S. Securities	\$ 118 371 73
Interest Earned on Bank Deposits	<u>2 364 00</u>
Total Interest Earned - Year 1947	\$ 120 735 73

INCINERATION CERTIFICATE

Incinerated Securities:	May 25, 1947
Covering Period:	January 1, 1946 - December 31, 1946
Securities Destroyed:	259 Bonds, 58,662 Coupons, 10 Warrants

I. FINANCIAL (Continued)

(c) Auditors' Report:

The auditors' report, covering 1946 operations, was completed on June 15, 1947.

Gross revenue from all divisions of the District amounted to \$6,294,379, which represents an increase of \$740,191 over the previous year. Expenses for all divisions were recorded as \$4,436,458, which is an increase of \$540,623 over the previous year's operating cost. The net revenue for the year was \$1,858,922, which was a gain of \$199,570 over 1945. The net revenue from operating divisions is as follows: U. S. Irrigation Division, \$1,054,229; Power Division, \$932,744, and for the Compañia de Terrenos y Aguas, Mexican Irrigation Corporation in which the District holds an operating interest, a loss of \$128,051.

The assets and liabilities of the District, as recorded by the auditors, are set forth in the following tabulation, which, also, gives for comparison the previous year's standing:

		<u>Irrigation</u>	<u>Power</u>	<u>Compañia</u>
Assets	- 1946	\$28 930 285	\$20 376 977	\$3 811 247
	- 1945	27 934 822	13 895 738	3 937 448
Liabilities	- 1946	16 809 188	15 233 933	8 213 720
	- 1945	16 871 660	9 727 013	8 211 871
Surplus	- 1946	12 121 091	5 142 984	4 402 473*
	- 1945	11 063 222	4 168 725	4 274 422*

*Deficit

The net revenue for the irrigation division (U. S.), when compared with the previous year, reflects a decrease of \$86,567. Operation and Maintenance costs continued to increase, which accounts for the decrease in net revenue under the previous year.

II. FINANCIAL (Continued)

The decrease in revenue is shown as follows:

Assessment revenues increased	\$ 26 81.
Water sales increased	121 337
Miscellaneous revenue decreased	<u>317 834</u>
Gross revenue increased	1207 515
Operating expenses increased	<u>323 882</u>
Net revenue decreased	\$ 36 347

*Deduction:

In one Power Division, the net revenue for the year amounted to \$952,741, as compared with a net revenue of \$827,359 for the previous year. The net power sales for 1946 amounted to \$2,668,326, as compared with net power sales of \$2,413,233 for 1945. The gross revenue increased approximately \$275,000, as compared with an increase in operating expense of \$168,000 for the year. The total number of kilowatt-hours sold increased approximately 8 per cent over the 1945 sales. The average selling price and the operating, maintenance, and overhead expenses were approximately the same for the two years.

A comparison of the two years is as follows:

	<u>1946</u>	<u>1945</u>
Net power sales	\$2 668 326	\$2 413 233
Other revenue	<u>11 171</u>	<u>11 171</u>
Total Revenue	\$2 679 497	\$2 424 404
Operating expenses	<u>2 311 417</u>	<u>2 256 400</u>
Net Revenue from Operations	\$368 080	\$168 004
Financial results	<u>287 473</u>	<u>11 231</u>
Net Revenue	\$655 553	\$179 235
1946 Estimate	\$ 117 192	

II. OPERATION AND MAINTENANCE OF WATER DISTRIBUTION

(a) General Comment:

The expenditures for the operation and maintenance of the main canals, lateral canals, and drains amounted to \$1,401,582, as compared to \$1,362,629 for the year 1946.

The operation and maintenance of the All-American Canal from Pilot Knob Dam to the West Side Main Turnout, was taken over by the Imperial Irrigation District March 1, 1947, and is now being operated as the All-American Canal Division, under Water Distribution.

The erosion on the canal system continued active, which required continuance of work on the channels and structures to meet the new gradients.

The erosion on the main canal channels has now reached a point which will require an active construction program over the next two or three years on the construction of drop structures for the protection of existing structures and the construction of additional structures to control the grade of the channels.

On the maintenance of lateral canal and drain channels, 663 miles were cleaned with kuta and gas-electric machines, and 176 miles with dragline machines.

On angledover-grading operations, 1,448 miles of banks were graded, and 16 miles of fence moved to new right-of-way line.

On the maintenance of lateral canal and drain structures, 59 new delivery gates were constructed, 215 replaced, and 798 repaired. On the maintenance of weirs and drops, 35 new structures were constructed, 131 replaced, and 611 repaired. Four new bridges were constructed, 47 replaced, and 107 repaired. Four new sluices were constructed, 5 replaced, and 14 repaired. Two new gateways were constructed and 1 repaired. Forty new field waste pipes were installed and 117 replaced, making a total of 2,327 of the several types of structures having been worked on. In addition, 241 self-gates were completed for private parties. The total estimated cost amounting to \$4,125,000.

A set of steel forms was constructed during the first part of the year for the construction of small concrete checks and drops on the lateral canal system, which eliminates the use of concrete building tile on this work.

18. Construction:

The expenditures for additions and betterments on the lateral and main canal system were \$105,431. The major portion of this work was made necessary by the recession of the channels, endangering or causing failure of existing structures.

The expenditure for main canals consisted of work on the East Highline Canal above Lateral No. 1 Check in connection with providing additional width of channel, repairs and extension of Side Main Heading, replacement of the Urita Lateral Heading, and completion of work on the construction of Lateral No. 11 Check which was started in 1946.

Work on the Central Main Canal consisted of preliminary work on the construction of reinforced concrete siphon weir at Ten Foot Drop, to check erosion of the channel and avoid undercutting of turnout from the All-American Canal, and, also, to provide for Briar Crossing over the Central Main Canal.

Work on the West Side Main Canal consisted of the completion of work on the Fern Check which was started in 1946, the construction of reinforced concrete structures for the replacement of Fern Canal Turnout, relocation of Fuchsia Lateral Turnout and lateral canal to provide for diversion above Fern Check, and replacement of Thorn Lateral No. 1 Turnout. Sandal and Trifolium Lateral No. 4 crossings were replaced with concrete pipe.

Eighty-three small concrete checks and drops were replaced and constructed on the lateral canal system.

19. Weed and Brush Control:

Burning operations were continued on the maintenance of canal and lateral drain channels, requiring 1,556,327 gallons of low-grade fuel oil. In addition

On one operation some of oil was sent to the canal with a total of 12,117 gallons of oil. On the other hand, 11,704 gallons of oil were sent to the canal. The total amount of oil sent to the canal was 23,821 gallons.

Summary

The damage to canal and control work was done by the canal. The amount of work done in control work was done by the canal. The amount of work done in control work was done by the canal. The amount of work done in control work was done by the canal.

On chemical control, 24 miles were treated, requiring 536 gallons of chemical and 114 man-hours. On hand control work, 3,767 man-hours were required. In burning control, 1,175 miles were burned, requiring 96,628 gallons of oil and 4,328 man-hours.

The dewatering of canal channels at regular intervals continued to be the most economical method of control, where existing grades permit complete draining and drying of the channels.

As the channels become stabilized, the conditions become more favorable to the development and density of moss growth, progressively requiring an increase in control work each season.

A new chemical formula was developed and made available for moss control work during the latter part of the year, reducing the cost from \$3.20 per gallon, for the chemical formerly used on this work, to 36 cents per gallon. Results obtained on trial applications with the new formula during the latter part of the year gave as good control as the former chemical, if not more satisfactory.

(f) Emergency Operations:

The expenditure for the year was \$33,912 on emergency operations for the repair of the August 7 storm damage in the Salinas and Westmorland areas.

was constructed. In addition to this, 88 BAC jobs were completed for private
parties, the total cost of which amounted to \$10,019

IV. POWER DIVISION

(a) Construction and Improvements:

Work on both the 1943 and 1945 power projects progressed satisfactorily during the year. Delivery dates for materials needed were extended in most cases, and was the main cause of delay. Contracts were let for most of the equipment needed for construction of the new steam plant and, also, for the additional unit at Drop No. 4. Considerable quantities of material were received at the steam station site and actual construction began on November 3, 1947, when excavation work for the powerhouse was started. Consolidation work of the District system and the California Electric system was continued by District forces, and the greater part of this work was completed. Additions to and consolidation of substations progressed satisfactorily. However, part of this work cannot be completed until some time next year, due to the delivery date for materials required. Actual installation of equipment at Drop No. 4 is not expected to begin until some time late next year.

(b) Operation and Maintenance:

Due to delayed arrival of materials and the long delivery date quoted on some materials and equipment, maintenance work progressed slowly throughout the year. New line equipment was secured for both Coachella and Imperial construction departments, and aided materially in advancing the maintenance work in progress.

Operation of hydro plants continued without interruption and, due to the increased demand for power, operation of the Diesel plant was stepped up, especially during peak loads and at times when other sources of power failed.

Operation and maintenance costs remained approximately the same as for 1946; consequently, the generating cost per kilowatt-hour remained unchanged.

V. LEGAL DEPARTMENT

(a) Resume of Activities:

The year 1947 being a legislative year, the Legal Department was required to spend a considerable period of time in Sacramento in scrutinizing legislation, appearing before committees, and following legislative procedures and bills as they might affect problems of Imperial Irrigation District and California irrigation districts in general.

The Irrigation Districts Association of California, in general or executive session, held meetings in January, March, April, August, and November. These meetings were attended and the Legal Department took an active part with particular reference to the matter of preserving the State's and local rights against federalization of projects in California.

The Legal Department, representing the Imperial Irrigation District, participated in numerous meetings and conferences as legal adviser to the Colorado River Board of California. The work of this Board, as is well known, is to preserve and protect the rights of the Colorado River water users in California and, in particular, to obtain a settlement of the conflicting claims of California and Arizona to waters of the Colorado River.

The annual meeting of the Colorado River Water Users' Association and the annual convention of the National Reclamation Association were attended for the

particular purpose of making known to the representatives of other states our situation with respect to Imperial Irrigation District's All-American Canal contract, its Pilot Knob power site, and Imperial Irrigation District's rights in the matter.

Various meetings were held with representatives of the United States in connection with the turning over of the physical properties and operation of the All-American Canal by the Department of the Interior to Imperial Irrigation District. In this, the District was successful as to a portion of the canal system, but first under the guise of the canal not being complete, and later at the request of the State Department because of complications incident to the Mexican Water Treaty, the Interior Department retained the Imperial Dam and the Imperial Dam-Pilot Knob section of the Canal.

Considerable work was done in connection with a proposal, formally submitted to the United States on December 3, 1947, for a contract with the State Department for the diversion, transportation, and delivery of that portion of the water of the Colorado River allotted to Mexico by the treaty of February 3, 1945. This contract, still under consideration at the close of the year, would permit Imperial Irrigation District to operate the Canal, and develop the Pilot Knob power site.

During the year, sixty-four actions to quiet title upon property that had been sold for delinquent Irrigation District assessments were filed, and forty-seven of these, and several actions filed in 1946, were brought to a successful conclusion, enabling the properties involved to be placed back on the tax rolls.

The general run of legal matters coming before the Legal Department, such as right of ways, construction of projects, operating problems, and the like, received constant attention throughout the year. One right-of-way decision, adverse to Imperial Irrigation District, was appealed and reversed.

VI. ALL-AMERICAN CANAL

(a) Operation and Maintenance:

Agreement for the transfer to Imperial Irrigation District of the main All-American Canal to Imperial Valley below Pilot Knob was formally executed on February 27, 1947, at Boulder City, Nevada. Thus, another major objective in Imperial Irrigation District's long campaign to obtain its All-American Canal contract rights became a reality when the District took over the care, operation and maintenance of that portion of the Canal.

The Canal is being operated as a division of the Water Distribution Department of the District under the supervision of W. E. Hartzog, Superintendent of Water Distribution and Drainage Construction, with Walter K. Bowker, Jr., in direct charge of operation and maintenance.

The operation and maintenance of the All-American Canal from Pilot Knob to the West Side Main Canal Turnout was taken over by the District on March 1, 1947. This inclusion added 62.74 miles of main canal and 21.30 miles of drains to the District's irrigation and drain system.

This section of the Canal and appurtenant drains are being operated as the All-American Canal Division under Water Distribution, with an office at 228 Imperial Avenue in Calexico.

The expenditures for the operation and maintenance of this division for the ten-month period were \$170,402.

Immediately following the taking over of the All-American Canal, it was necessary to provide personnel and equipment for work on reconditioning the mechanical gates on all the control structures for control of water to the distribution system.

During the period from March 1 to December 31, inclusive, 109,163 acre feet of water were delivered to the Coachella Canal, 2,041,252 acre feet to the divisions, and 3,556 acre feet to land on the East Mesa.

On maintenance work of the canal, repairs to control gates were carried on, 62 miles of banks cleared, and 70 miles graded. On cross-control work, 461 miles were burned by conventional burning brush and mechanical work. Seepage-control work on 5,900-foot section of canal required seeping of canal and application of 40,650 gallons of oil.

(b) Bard Area Investigation:

Drainage work in the Bard area was confined to the measuring of existing test wells and recording and transmitting of data obtained.

VII. EAST MESA

(a) Farm No. 2:

On April 22, 1947, the Board of Directors of Imperial Irrigation District and the U. S. Bureau of Reclamation entered into a contract under which the District will lease 560 acres of land on East Mesa to conduct an agricultural experimental farm for the purpose of determining the feasibility of irrigation farming on certain types of soil on the East Mesa of Imperial County.

The lease provides that the leased premises include various soil types classified by the Bureau of Reclamation as Class 2, Class 3, and Class 6 lands. The lease will run for a period of ten years.

On October 10, 1947, an invitation for bids for construction of irrigation canals, laterals and appurtenant structures was sent out and on November 10, 1947, the contracting firm of Foster and Mohr, of Riverside, California, was awarded the contract for this work. The amount of \$46,255.10 did not include grading or leveling bids, which will be invited later.

(b) Farm No. 2:

To supplement experimental operations on Farm No. 2, the Board of Directors of Imperial Irrigation District entered into a lease-back contract with the U. S. Bureau of Reclamation on July 26, 1947, for the 320-acre farm at Tract No. 3 on the All-American Canal. This test plot has been operated by the Bureau of Reclamation for more than a year, but was returned to the District when the Bureau was unable to proceed with its experiments there.

The District, following unanimous approval of the Imperial County Farm Bureau and officials and members of the American Legion, entered into a sublease with the Eady Farming Company of Calexico, and on August 1, 1947, that company formally took over operation of the farm. This arrangement, in addition to putting the farm in the hands of a well-known Imperial Valley pioneer farm family who are known as efficient and successful farm operators, will allow a veteran of the late war the opportunity of conducting the experimental test on East Mesa that will ultimately prove beneficial to other veterans when the area is opened to them for homesteading in accordance with the provisions of the Boulder Canyon Project Act. Joseph Eady, who is a member of this company, served with distinction in the U. S. Coast Guard during the late war.

The following comment from the Bureau of Reclamation on farming operations for 1947, clearly substantiates the Board's good judgment in selecting the Eady Farming Company as sublessees:

"Representatives of the Branch of Operation and Maintenance have inspected the tract on several occasions and have been impressed by the excellent farming job being done. May I suggest that you convey to the sublessees my commendation on the manner in which the work has been conducted."

VIII. NORTH END IMPROVEMENT PLAN

The engineering department continued their studies and observations of the North End system throughout 1947, in order to determine the cost of a temporary method of furnishing the Vail area with water from the Highline Canal in quantities as were available until such time as the permanent project could be built. Studies of the quality of the water at the North End Dam, on the Alamo River, continued throughout the year.

IX. COLORADO RIVER BOARD

The principal legislative activities of the Colorado River Board was the introduction of legislation to authorize the United States Attorney General to bring suit against the states of Nevada, Arizona, and California to determine the respective rights of each to Colorado River water.

Mr. M. J. Dowd, consulting engineer for Imperial Irrigation District, together with others, appeared before the House of Representatives committee, opposing again, as in 1946, the Welton-Mohawk division of the Gila, Arizona, bill as it was introduced, and were successful in having the project amended so that it would be limited to the original amount of water contemplated for the Gila project as authorized in 1937.

They were, also, successful in getting the committee to recommend that no new projects be authorized in the Lower Basin of the Colorado River until the rights of Arizona and California were determined.

In February, 1947, California filed its comments on the report of the Secretary of the Interior, entitled, "The Colorado River," referred to in more detail in my 1946 report.

The latter part of the year, the Board was host to several groups of senators and congressmen and escorted them over the Colorado River basin so that they might become better acquainted with the problems at hand.

The Colorado River Association, sponsored by the Colorado River Board, was organized and began a very comprehensive educational program so that the people of California would know the necessity of uniting to protect their Colorado River water rights.

The close of the year was marked by the Secretary of the Interior filing his report on the General Arizona Project. This report will be dealt with in detail in my 1948 report. The writer was elected Chairman of the Board again for the year 1947-48.

X. CONCLUSION

Again, I am indebted to all the personnel of the District, including the elected officers, for their loyalty and co-operation.

To the people, who are the District, I extend my thanks for their continued support.

EVAN T. HEWES
President of the Board of Directors

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IMPERIAL IRRIGATION DISTRICT

ANNUAL REPORT BY THE PRESIDENT OF THE BOARD OF DIRECTORS

JANUARY 1, 1949

File

DIRECTORS

Evan T. Hewes, President of the Board

Charles Morrow

Mack Trentham

B. F. Grubel

Ollie Stewart

ASSESSOR-COLLECTOR

W. A. McFadden

SECRETARY

G. L. Dermody

TREASURER

Anna T. McManus

El Centro, California
January 1, 1949

To the
Board of Directors and
All Persons Interested in
Imperial Irrigation District

As President of the Board of Directors, it is my privilege to submit a review of District operations and progress for the year ended December 31, 1948.

In this brief resume I will report on the most important phases of District operations:

- I. Financial
 - (a) Statement of condition
 - (b) 1947-48 assessment
 - (c) Assessor-Collector's office
 - (d) Treasurer's office
 - (e) Auditor's report
- II. Operation and Maintenance of Water Distribution System
 - (a) General comment
 - (b) Construction
 - (c) Weed and brush control
 - (d) Seepage
 - (e) Moss control
 - (f) Emergency operation
- III. Drainage Construction, Maintenance and Improvements
 - (a) Construction
 - (b) Maintenance
- IV. Power Division
 - (a) Construction
 - (b) Operation and maintenance
- V. Legal Department
- VI. All-American Canal
 - (a) Operation
 - (b) Bard Area investigation
- VII. East Mesa
 - (a) Farm No. 1
 - (b) Farm No. 2
- VIII. North End Improvement
- IX. Colorado River Board
- X. Conclusion

FOREWORD

The Directors of the District, other Elected Officers, and the Department Heads remain unchanged from the preceding year.

A vitally important, long-standing issue was resolved on August 2, 1948, when William E. Warne, Assistant Secretary of the Department of the Interior, approved the formula proposed by the District Board for the computation of net proceeds from power development on the All-American Canal. Under the provisions of the contract of December 1, 1932, net proceeds from power development on the All-American Canal are to be applied to the cost of the construction of the canal.

Approval of the District's formula was important, not only because it freed at the present time between \$500,000 and \$600,000 from possible claims by the Government, but also because during the entire repayment period of the All-American Canal contract the Government will have a claim only against net proceeds from power development on the All-American Canal, instead of against net proceeds from the District's entire power system.

The agreement reached can be summarized briefly as follows: The District will pay to the United States, each year, the percentage of net proceeds from power, after deducting operation and maintenance, and bond principal and interest requirements, which is equal to the ratio of the District's investment (less depreciation) in power facilities on the All-American Canal to the investment (less depreciation) in the entire District power system.

The work being done under the 1945 Power Project advanced satisfactorily throughout the year. The El Centro Steam Station was nearing completion at the end of the year, construction of the El Centro-Coachella line had begun, and delivery dates on equipment for the additional unit at Drop No. 4 on the All-American

Canal were such that plans for that installation were set for the latter part of 1949. Consolidation of the District system and the system acquired from the California Electric Company was nearing completion at the end of the year.

Engineers' reports on the estimated plant expansions required and cost estimates under the proposed 1949 Power Development Project, and on the financial feasibility of the proposed Project, were under consideration by the Board of Directors at the end of the year.

Construction of the main canal to Farm No. 2 on East Mesa was completed early in the year, land leveling was completed on 400 acres and crops were growing on 320 acres before the end of the year. Eighty acres remain to be leveled.

For the first time since the beginning of the war the District had an adequate staff of well-qualified employees for office and field. With the exception of a few electrical items, there was no delay in obtaining materials and supplies. Equipment deliveries were stepped up to the extent that the automotive and field equipment ordered throughout the year was received without undue delay, and District fleets were brought up to normal operating strength.

I. FINANCIAL

(a) Statement of Condition:

The following table, prepared by Treasurer Anna T. McManus, gives the changes that took place in the District's long-term indebtedness for the calendar year ended December 31, 1948.

BOND INDEBTEDNESS

	Total Indebtedness <u>Dec. 31, 1947</u>	<u>Retired</u>	Total Indebtedness <u>Dec. 31, 1948</u>
General Obligation Bonds	\$13 815 000 00	\$300 000 00	\$13 515 000 00
Power Revenue Bonds	<u>14 402 000 00</u>	<u>313 000 00</u>	<u>14 089 000 00</u>
	\$28 217 000 00	\$613 000 00	\$27 604 000 00

NOTE: \$92,815.02, First Refunding Bonds and Warrants, not included in the above. Said bonds and warrants were called for retirement July 1, 1943, and funds set aside for their retirement.

Some of the factors affecting the financial condition of the District are:

- (1) A general increase in salaries of ten cents per hour for hourly employees and twenty-one dollars per month for monthly employees announced January 1, 1948, accounted for the increase of \$443,555 in pay rolls over last year. The number of employees did not change materially.
- (2) Kilowatt-hour sales increased to a new high with net power income showing an increase of \$230,806 over 1947.
- (3) Net income from the irrigation division was recorded as being \$69,596 less than for 1947.
- (4) Total operating revenue deductions for all divisions increased by \$752,690 over 1947. This increase reflects continued high prices for materials required for maintenance and the general increase in salaries.

The sound financial condition of the District at the close of the year is indicated by the financial reports appearing on the next few pages of this report.

POWER DIVISION

	<u>1948</u>	Over <u>1947</u>	Under <u>1947</u>
1. Operating Revenue	\$ 3 581 696	\$ 509 034	
2. Operating Deductions	2 025 636	291 017	
3. Operating Income	\$ 1 556 060	218 017	
4. Other Income	37 507	4 102	
5. Gross Income	\$ 1 593 567	222 119	
6. Income Deductions	270 385		\$ 8 687
7. Net Income, or Current Earned Surplus	<u>\$ 1 323 182</u>	230 806	
1a. Current Assets	\$ 1 388 954		422 568
2a. Investment and Fund Accounts	4 646 366		2 538 202
3a. Fixed Assets	15 758 110	3 773 178	
4a. Other Assets and Deferred Charges	387 636	248 389	
5a. Current Liabilities	591 665	16 055	
6a. Long-Term Liabilities	13 765 000		324 000
7a. Deferred Credits and Reserves	241 628	30 360	
8a. Surplus	7 582 773	1 338 382	

WATER DIVISION

(Accounts of Subsidiary Mexican Company not Included)

	<u>1948</u>	Over <u>1947</u>	Under <u>1947</u>
1. Operating Revenue	\$ 3 886 872	\$ 376 759	
2. Operating Deductions	2 525 204	452 122	
3. Operating Income	\$ 1 361 668		\$ 75 363
4. Other Income	39 962		1 993
5. Gross Income	\$ 1 401 630		77 356
6. Income Deductions	473 888		7 760
7. Net Income, or Current Earned Surplus	<u>\$ 927 742</u>		69 596
1a. Current Assets	\$ 4 079 185	114 362	
2a. Investment and Fund Accounts	1 919 552	30 624	
3a. Fixed Assets	16 170 693	992 687	
4a. Other Assets and Deferred Charges	476 738	16 497	
5a. Investment in Subsidiary Mexican Co.	7 945 399		
6a. Current Liabilities	1 195 001	536 660	
7a. Long-Term Liabilities	13 647 815		355 000
8a. Deferred Credits and Reserves	1 683 104	23 579	
9a. Surplus	14 065 647	948 931	

CASH AND FUND BALANCES
DECEMBER 31, 1948 AND DECEMBER 31, 1947

	December 31 1948	December 31 1947	Increase or Decrease*
<u>IRRIGATION OPERATING FUNDS:</u>			
Assessments Collected for Following Year	\$ 339 434	\$ 308 456	\$ 30 978
Other Cash Balances	2 269 453	2 271 459	2 006*
Total Cash and Fund Balances	\$ 2 608 887	\$ 2 579 915	\$ 28 972
<u>COMPANIA OPERATING FUNDS: (1)</u>			
Compañia General Fund	\$ 1 763	\$ 12 907	\$ 11 144*
Compañia Reserve Fund	47 308	80 420	33 112*
Total Cash and Fund Balances	\$ 49 071	\$ 93 327	\$ 44 256*
<u>IRRIGATION BOND AND WARRANT FUNDS:</u>			
Assessments Collected for Following Year	\$ 507 080	\$ 498 360	\$ 8 720
Other Cash Balances	655 428	640 957	14 471
Total Cash Balances	\$ 1 162 508	\$ 1 139 317	\$ 23 191
Less Unpaid Matured Principal and Interest	(141 928)	(142 895)	967*
Less Int. Maturing Jan. 1 of Following Year	(230 159)	(235 188)	5 029*
Less Bonds Called for Redemption Jan. 1, 1949	(40 000)	-	40 000
Total Fund Balances	\$ 750 421	\$ 761 234	\$ 10 813*
<u>DRAINAGE FUND:</u>			
Assessments Collected for Following Year	\$ 116 966	\$ 115 049	\$ 1 917
Other Cash Balances	2 050	26 327	24 277*
Total Cash and Fund Balances	\$ 119 016	\$ 141 376	\$ 22 360*
<u>MISCELLANEOUS IRRIGATION FUNDS:</u>			
Total Cash and Fund Balances	\$ 638 028	\$ 608 235	\$ 29 793
<u>POWER OPERATING REVENUE FUNDS:</u>			
Cash Balances	\$ 335 995	\$ 932 826	\$ 596 831*
Due from Power Construction Fund	750 262	116 179	634 083
Fund Balances	\$ 1 086 257	\$ 1 049 005	\$ 37 252
<u>POWER BOND FUNDS:</u>			
Cash Balances	\$ 1 056 333	\$ 966 997	\$ 89 336
Less Unpaid Matured Bond Interest	(2 529)	(1 561)	968
Less Unpaid Interest Maturing Jan. 1 of Following Year	(197 982)	(203 212)	5 230*
Less Unpaid Bonds Maturing Jan. 1 of Following Year	(162 000)	(151 000)	11 000
Fund Balances	\$ 693 822	\$ 611 224	\$ 82 598
<u>POWER CONSTRUCTION FUNDS:</u>			
Cash Balances	\$ 2 808 616	\$ 5 459 139	\$2 650 523*
Due Power Revenue Fund	(750 262)	(116 179)	634 083
Fund Balances	\$ 2 058 354	\$ 5 342 960	\$3 284 606*
<u>MISCELLANEOUS POWER FUNDS:</u>			
Cash and Fund Balances	\$ 781 418	\$ 758 432	\$ 22 986
<u>ALL FUNDS:</u>			
Assessments Collected for Following Year	\$ 963 480	\$ 921 865	\$ 41 615
Other Cash Funds	8 596 392	11 757 699	3 161 307*
Total Cash Balances	\$ 9 559 872	\$12 679 564	\$3 119 692*
Less Bond Principal and Interest due Jan. 1	774 598	733 856	40 742
TOTAL FUND BALANCES	\$ 8 785 274	\$11 945 708	\$3 160 434*

() Deduction

*Decrease

(1) Funds of Subsidiary Company in Lower California, Mexico

IMPERIAL IRRIGATION DISTRICT
And Compañia de Terrenos y Aguas de la Baja California, S.A.
CONSOLIDATED REVENUE AND EXPENSE STATEMENT
JANUARY 1 TO DECEMBER 31, YEAR 1948

	<u>Consolidated</u>	<u>Imperial Irrig. District</u> <u>Power Div.</u>	<u>Irrig. U.S.</u>	<u>Compañia</u> <u>de T. y A.</u> <u>Irrig. Mex.</u>
<u>REVENUE</u>				
<u>OPERATING REVENUES:</u>				
Realized Revenue from:				
Current Year Assessments	\$1 372 155		\$1 372 155	
Penalties and Costs	4 793		4 793	
Redemption of Delinquent Assessments	38 236		38 236	
Interest Coll. on Redemptions	<u>4 128</u>		<u>4 128</u>	
Total Collected by Assessor-Collector	\$1 419 312		\$1 419 312	
Sales of Land Held under Assessment Deeds	58 955		58 955	
Equivalent of Current Assessments on Tax Deed Land	37 061		37 061	
Rental of Land Held under Assessment Deeds	3 423		3 423	
Interest on Land Sales Contracts	<u>6 950</u>		<u>6 950</u>	
Total Revenue Derived from Assessments	\$1 525 701		\$1 525 701	
Water Sales	2 335 334		1 984 430	\$350 904
Gate Service Charges	51 178		51 178	
Pipe Service Charges	7 062		7 062	
Landowners' Share of Construction Costs	46 483		46 483	
Sale of Rock from Andrade Quarry	8 878		8 878	
Rental of Buildings	37 728	\$ 7 091	30 637	
Rental of Operative Land	6 736		6 736	
Rental of Equipment	13 168		13 168	
Discount on Second Refunding Bonds Redeemed	7 130		7 130	
<u>Power Sales:</u>				
Residential or Domestic Sales		1 315 024		
Rural Sales - Agricultural Power		456 264		
Commercial and Industrial Sales		1 443 394		
Public Street and Highway Lighting		20 101		
Other Sales to Public Authorities		184 237		
Sales to Other Electric Utilities		112 514		
Interdepartmental Sales		<u>40 485</u>		
Total Power Sales	3 572 019	\$3 572 019		
Sales of Water Delivered at Boundary (Inter-Div.)			(198 514)	
Miscellaneous Revenue	<u>9 634</u>	<u>2 587</u>	<u>6 955</u>	<u>92</u>
TOTAL OPERATING REVENUES	\$7 621 051	\$3 581 697	\$3 886 872	\$350 996

	Consolidated	Imperial Irrig. District Power Div.	Irrig. U.S.	Compañia de T. y A. Irrig. Mex.
Total Operating Revenue - Brt. Fwd.	\$7 621 051	\$3 581 697	\$3 886 872	\$350 996
<u>OPERATING REVENUE DEDUCTIONS:</u>				
Operating Expenses:				
Oper. & Maint. of Irrig. System	\$2 290 538		\$2 153 604	\$136 934
Oper. & Maint. of Power System:				
Production Expenses		\$ 335 190		
Power Purchased		344 188		
Transmission Expenses		70 988		
Distribution Expenses		405 245		
Accounting & Collecting Expenses		141 957		
Sales Promotion Expenses		39 219		
Administrative and Gen. Expenses		289 161		
Total Power Oper. and Maint.	1 625 948	\$1 625 948		
Expense of Tax Deed Land Sales and Rentals	31 342		31 342	
Uncollectible Accounts	3 240	3 000	240	
Employees' Group Insurance and Pension Expense	121 665		121 665	
Miscellaneous Expenses and Losses	12 919		2 182	10 737
Cost of Water Deld. at Boundary - Loss on Exchange	16 202			16 202
Cost of Water Deld. at Boundary (Inter-Div.)				(198 514)
Total Operating Expenses	\$4 101 854	\$1 628 948	\$2 309 033	\$362 387
Depreciation of:				
Equipment and Facilities	57 867		56 614	1 253
Buildings	20 558		19 533	1 025
Power System	353 438	353 438		
Amort. of Canal System and Defense Works, Mexico	145 555			145 555
Amort. of Plant Acquisition Adjustment	35 967	35 967		
Losses on Sales and Retirements of Assets	139 453		139 453	
Taxes	11 343	7 283	571	3 489
Total Operating Revenue Deductions	\$4 866 035	\$2 025 636	\$2 525 204	\$513 709
Net Operating Revenue	\$2 755 016	\$1 556 061	\$1 361 668	\$162 713*
<u>OTHER INCOME:</u>				
Int. on U. S. Bonds and Treasury Certs. and Notes	\$ 66 050	\$ 30 271	\$ 35 779	
Int. on Bank Deposits & Misc. Int.	11 191	7 008	4 183	
Rental of Other Physical Property	228	228		
Total Other Revenue	\$ 77 469	\$ 37 507	\$ 39 962	
GROSS INCOME	\$2 832 485	\$1 593 568	\$1 401 630	\$162 713*
<u>INCOME DEDUCTIONS:</u>				
Interest on District Bonds	\$ 737 225	\$ 270 385	\$ 466 840	
Interest on District Warrants				
Amortization of Debt Discount	7 048		7 048	
Total Income Deductions	\$ 744 273	\$ 270 385	\$ 473 888	
NET INCOME - EARNED SURPLUS CURRENT YEAR	\$2 088 212	\$1 323 183	\$ 927 742	\$162 713*
*Deficit				

(b) 1947-48 Assessment:

The Board of Directors of Imperial Irrigation District, on August 22, 1947, set the annual assessment levy for the District at \$3.50 per \$100.00 of assessed valuation for the 1947-48 assessment year. Thus, for the past four years the assessment levy has remained at \$3.50. Aggregate assessed value of the land within Imperial Irrigation District, as equalized, is the sum of \$40,438,484, which is an increase of \$1,060,195 over the preceding assessment year's total of \$39,378,289. This increase in valuation is due principally to return of tax deed land to the assessment roll.

The \$3.50 levy is based upon a net equalized valuation of \$34,372,711, and is designed to raise a total of \$1,202,504 which will be an increase of \$31,305 more than last year's total of \$1,171,199.

The distribution of the total amount to be raised is as follows: 54.06 per cent will be used to pay interest on bonds and warrants, and to provide for their retirement; 33.46 per cent will be used, together with other revenues of the District, to provide funds for irrigation operating costs; and 12.48 per cent will be used for drainage costs.

(c) Assessor-Collector's Office:

Collections for the year 1947-48 were very good, the delinquency being 3.02 per cent, which is less than one fifth of one per cent higher than the previous year, which was the lowest on record. As of the delinquency date in December, there was only 8.8 per cent left to be collected on the first installment, 58.49 per cent remained to be collected on the second installment, and for the entire assessment there remains to be collected 33.64 per cent.

The outside work was accomplished without employing extra help, and there was adequate experienced personnel available for all office work.

I. FINANCIAL (Continued)

(d) Treasurer's Office:

In addition to the general office work of the Treasurer's office, the following business was handled during the year 1948:

87,786 bonds and coupons were paid, for which
832 checks were issued and involving an ex-
penditure of \$ 1 487 287 55

Cashier, pay roll, Compañia pay roll, and expense
checks amounting to 36,564 checks and involving
an expenditure of 9 334 673 17

Total Expenditures \$10 821 960 72

INVESTMENTS

Total U. S. Securities - December 31, 1947	\$ 9 602 000 00
U. S. Securities purchased - 1948	<u>175 000 00</u>
Total U. S. Securities	\$ 9 777 000 00
Less U. S. Securities cashed - 1948	<u>5 800 000 00</u>
Total U. S. Securities - December 31, 1948	\$ 3 977 000 00

INTEREST EARNED

Interest earned on U. S. Securities	\$ 101 907 00
Interest earned on Bank Deposits	<u>10 859 00</u>
Total Interest Earned - Year 1948	\$ 112 766 00

INCINERATION CERTIFICATE

Cremated Securities:	June 30, 1948
Covering Period:	January 1, 1947 - December 31, 1947
Securities Destroyed:	254 Bonds, 57,860 Coupons, 54 Warrants

I. FINANCIAL (Continued)

(e) Auditor's Report:

The auditors' report, covering 1947 operations, was completed on May 24, 1948.

Consolidated gross revenue for all divisions of the District totaled \$6,833,766, which is an increase of \$539,387 over 1946. Expenses were recorded as \$4,835,011, which is an increase of \$299,554 over the previous year. Net revenue for the year was \$1,998,755, or an increase of \$139,633 over 1946. Net revenue was as follows: U. S. Irrigation Division, \$984,412; Power Division, \$1,133,365; and for the Compañia de Terrenos y Aguas, Mexican Irrigation Corporation in which the District holds an operating interest, a loss of \$119,022.

The assets and liabilities of the District, as recorded by the auditors, are set forth in the following tabulation, which, also, gives for comparison the previous year's standing:

		<u>Irrigation</u>	<u>Power</u>	<u>Compañia</u>
Assets	- 1947	\$29 466 822	\$21 142 306	\$3 989 328
	- 1946	28 930 285	20 376 977	3 811 247
Liabilities	- 1947	16 350 030	14 903 576	8 510 824
	- 1946	16 809 188	15 233 933	8 213 720
Surplus	- 1947	13 116 792	6 238 730	4 521 490*
	- 1946	12 121 096	5 142 984	4 402 473*

*Deficit

The net revenue for the irrigation division (U.S.), when compared with the previous year, reflects a decrease of \$69,826 for 1947. A continued aggressive maintenance program resulted in an increase in operation and maintenance costs of \$217,714.

I. FINANCIAL (Continued)

Other factors affecting the net decrease in revenue are as follows:

Assessment Revenue Increased	\$ 2 286
Water Sales Increased	188 762
Miscellaneous Revenue Decreased	<u>51 885*</u>
Total Revenue Increased	\$139 163
Operating Expenses Increased	\$217 714
Financial Costs Decreased	<u>8 725*</u>
Net Revenue Decreased	\$ 69 826

*Deduction

In the Power Division, an increase of 10 per cent in kilowatt-hour sales over 1946 accounts for the increase in net power sales which is recorded as \$3,057,296, or a gain of \$368,970 over the previous year. Operating expenses increased by \$191,677 over 1946, due, largely, to the increased amount of power purchased from outside sources. The average selling price per kilowatt-hour, operation and maintenance costs, and overhead expenses remained approximately the same for 1946 and 1947, while the percentage of power purchased to total sales increased from 8.2 in 1946 to 10.8 in 1947.

A comparison of the two years is as follows:

	<u>1947</u>	<u>1946</u>
Net Power Sales	\$3 057 296	\$2 688 325
Other Revenue	<u>46 095</u>	<u>31 174</u>
Total Revenue	\$3 103 391	\$2 719 499
Operating Expenses	<u>\$1 690 954</u>	<u>\$1 499 277</u>
Net Revenue from Operations	\$1 412 437	\$1 220 222
Financial Costs	<u>\$ 279 073</u>	<u>\$ 287 478</u>
Net Revenue	\$1 133 364	\$ 932 744
1947 Increase	\$ 200 620	

II. OPERATION AND MAINTENANCE OF WATER DISTRIBUTION

(a) General Comment:

The expenditures on operation and maintenance of the main canals, lateral canals, and drain systems were \$1,598,030, compared to \$1,548,251 for the year 1947.

The pay roll for the eight operating divisions was \$716,906, compared to \$638,366 for the year 1947.

There were 1,677,000 acre-feet of water delivered to water users in 240,170 runs.

No major water cutouts were made on the system, no major breaks occurred, and no delay occurred in the delivery of water as ordered by the water users.

The erosion on the canal channels continued active, working progressively downstream through the system, which required the continuation of work on the maintenance work and construction of new structures to control erosion on the channels developed by the clear water.

On the maintenance of the lateral canal and lateral drain channels, 693 miles were cleaned with bucket-line machines and 175 miles by dragline dredges. There were 1,185 miles of banks graded in connection with dredge work and maintenance of operational roads.

On lateral canal structures, 109 new structures were constructed, 15 of wood construction, 73 of concrete, and 15 rubble.

On the general maintenance operations, 436 structures were replaced, 31 of wood, 341 of concrete, and 63 rubble. There were 1,537 wood structures repaired and 39 new field outlet pipes to lateral drains were installed and 93 were replaced. The diameter of 414 field outlet pipes was reduced from eighteen-inch diameter to twelve-inch diameter. One hundred forty-two pipe installations were made and 89 replaced by the divisions.

The expenditure on work performed for water users on advance deposits amounted to \$61,252.00, compared to \$44,592.00 for year 1947.

There were 132 county road structures constructed under the co-operative agreement between the County of Imperial and the District on the construction and replacement of county road structures crossing District facilities.

On rodent control, 118,073 gas bombs were used on 2,579 miles of control work, and 8,560 man-hours were employed on the patrolling of the canals, compared to 11,504 man-hours for 1947.

(b) Construction:

The expenditures on additions and betterments to main and lateral canals were \$267,789, compared to \$148,118 for the year 1947, of which \$112,577 was expended on main canals and \$155,212 on lateral canals.

The major structures on main canals were:

- (1) East Highline Canal - Replacement of laterals "F" and "H" Turnout structures.
- (2) Central Main Canal - Replacement of Briar wood siphon over the Central Main Canal with a reinforced concrete siphon drop structure for Briar Canal crossing under the Central Main Canal, and a control drop on the Central Main channel. The existing wood structures serving as headings on the Acacia and Alder Canals were replaced with mass concrete structures. The Birch Canal heading was also reconstructed and the Briar Lateral 8 Heading was replaced. The total cost of this installation was \$104,791.36.
- (3) West Side Main Canal - Replacement of Trifolium Laterals 3 and 7 Turnout structures with reinforced concrete pipe construction. Replacement of existing wood operating checks at Trifolium Laterals 2, 3, 4, and 10; also, at deliveries 1 and 197. The existing wood structures were replaced with 3-bay mass concrete structures. Seven wood delivery gates and bridges were replaced with mass concrete structures and reinforced concrete pipe.

The major construction on the lateral canals was on construction of 51 new and replacement of 244 delivery gates; construction of 25 new checks and replacement of 135; construction of 23 new drop control structures and

replacement of 6; and the reconstruction work on the Thistle Lateral Canal channel.

The concrete-lined section of the Alder Lateral 7 Canal, between gates 70 and 74, was replaced with earth section. The demand on the canal having reached a point where the old concrete-lined section did not have sufficient capacity to carry the water required, and due to the deterioration of the concrete lining on this section it required the replacement of this section of canal.

(c) Brush and Weed Control:

Burning continued to be the principal method on the control of growth on the canal and drain channels, requiring 1,827,876 gallons of low-grade fuel oil to burn 24,671 miles of channels.

There were 4,705 pounds of 2-4-D used on experimental spray work on canal banks, with results on all woody growth, being particularly effective on salt cedar which has become one of the most difficult growths to control on the system.

On spray work of canal and drain channels, 16,825 gallons of aromatic weed oil were used, with effective results being obtained on all growth of the grass family. From records kept to date, it appears that this method of control will be more economical than present burning methods.

On noxious-weed control, 100 pounds of Atlacide, 15 pounds of 2-4-D, and 400 gallons of aromatic oil were applied on spot work for horse nettle control.

(d) Seepage Control:

The expenditure on seepage control was \$33,400 for work on 54 locations, on which 16 miles of banks were cored. Oil was applied on 22 locations, consisting of 18,200 lineal feet and requiring 78,365 gallons of oil.

(e) Moss Control:

The expenditure on moss-control work was \$42,950, compared to \$40,531 for the year 1947.

The mileage affected by aquatic growth in the canal and drain channels continued to encroach farther into the system as the gradients on the channels become stabilized.

On chemical-control work, 253 miles were treated, requiring 20,955 gallons of chemical and 1,981 man-hours, compared to 59 miles treated, 1,470 gallons of chemical, and 382 man-hours for the year 1947. The chemical now being used on this work costs approximately 40 cents per gallon, compared to \$3.20 per gallon for chemical used in former years.

On hand-control work, 7,416 man-hours were required, compared to 12,469 man-hours for 1947.

On burning-control work, 774 miles were burned, requiring 81,720 gallons of oil and 2,120 man-hours, compared to 1,175 miles burned, 96,628 gallons of oil and 2,828 man-hours for year 1947.

(f) Emergency Operations:

No emergencies occurred during the season of sufficient importance to require expenditure of emergency funds.

III. DRAIN CONSTRUCTION, MAINTENANCE, AND IMPROVEMENTS

(a) Construction:

The construction of District-maintained drains was continued on the co-operative plan as in former years, the landowners supplying the right of way and contributing \$800.00 per mile towards construction cost, plus the materials for field outlets into District drains. The District bearing all

remaining cost to complete the construction and installation of field outlets. The expenditure on Special Drainage was \$451,063, compared to \$415,300 for the year 1947.

On new construction, 10.13 miles of main drains and 8.97 miles of lateral drains were constructed, and 19.27 miles of main drains and 46.09 miles of lateral drains were reconstructed.

In addition to work performed by the District, private contractors constructed 22.63 miles of new farm drains and reconstructed 87.65 miles of existing farm drains.

On the installation of farm tile drains, 393.80 miles were installed by private contractors, the engineering and inspection work in connection with the installations, being taken care of by the District.

The total miles of drains for the year by the District and private contractors were as follows:

Construction of new open drains - miles	61.00
Reconstruction of existing open drains - miles	133.74
Installation of farm tile drains by private contractors - miles	393.80

making a total of 588.54 miles of drain channels constructed and improved during the year.

The record on the total mileage of District-maintained drains and privately maintained farm tile drains in the District as of December 31, 1948, shows the following:

District Main Drains - miles	526.65
District Lateral Drains - miles	<u>792.58</u>
Total Miles of District Drains	1,319.23
Total Miles of Farm Tile Drains	<u>1,503.13</u>
Total Miles of Drain Channels in the District	2,822.36*

*Does not include private open ranch drains in Imperial Valley, the total mileage of which is estimated to be 500.00 miles as of January 1, 1949.

(b) Operation and Maintenance of the Main Drain System:

The expenditures on the operation and maintenance of the main drains and drain outlets were \$215,341, compared to \$219,548 for the year 1947.

The curtailment of maintenance operations to further construction activities in connection with farm tile outlets is reflected in the comparison of the total expenditures for the year with the previous year.

Burning operations were continued on the control of growth in the drain channels, 4,095.71 miles having been burned, requiring 387,374 gallons of low-grade fuel oil and 11,147 man-hours.

On chemical moss-control work, 129.84 miles of channels were treated, requiring 13,708 gallons of chemical and 1,181 man-hours.

There were no channel changes on the Alamo and New River Outlets to the Salton Sea during the year.

At a cost of \$7,459.00, a reinforced concrete drop structure was constructed on the Holtville Main Drain one fourth mile downstream from the Holt Avenue-County road crossing; the height of side walls being 12 feet, length of structure 38 feet, width of weir 25 feet, and drop in water surface 5 feet.

Heavy rock riprap was placed for a distance of 75 feet downstream and 25 feet upstream from the structure. This is the fifth drop constructed on this channel to stabilize the grade and prevent erosion. This now makes three miles of controlled channel on this drain with approximately four miles remaining to be controlled by the construction of additional drop structures.

IV. POWER DIVISION

(a) Construction and Improvements:

Construction work under the 1943 Power Project was confined to consolidation of distribution systems after the completion of the Coachella substation in August. This substation represents the first part of the District's long-range plan for providing an adequate power system for Coachella Valley and represented the major installation under the 1943 Project for this year.

Several major construction contracts on the 1945 Power Project pertaining to the El Centro Steam Station were nearing completion at the end of the year. Provided that work continues on schedule, this addition to the District's power system should become available for use in April or May of 1949. Construction of the El Centro-Coachella line was begun and should be completed during the first half of 1949. Material for the El Centro switching station is arriving daily; however, actual construction will not begin until the middle of 1949. The greater part of the equipment for the additional unit at Drop No. 4 on the All-American Canal has been delivered; however, construction cannot get under way until late in 1949, due to delays in the manufacture of some of the equipment needed. Notice of completion early in 1949 of additional transformers needed at Drop No. 4 has been received, but construction will not be completed on this substation until March or April, 1949.

(b) Operation and Maintenance:

Additional line equipment was added to both the Coachella and Imperial departments, and maintenance work progressed satisfactorily on systems in both areas. Revamping of the substation at Indio was near completion at the

end of the year, and the operating department had added 458 meters to the system in that area by August, 1948. Operating expenses for 1948 increased by \$191,170 over 1947; total kilowatt-hour sales for the year was 186,615,471, as compared to 153,252,491 for 1947.

Due to the additional demand on the system, both the hydro plants and the Diesel plant continued to operate without interruption, except for necessary maintenance.

V. LEGAL DEPARTMENT

Federal legislation (proposed and enacted); Federal, Colorado River Basin, and State water and power policies and programs; United States-District contractual relations; and the expanding operations of the District in the Irrigation, Drainage, and Power Division, required extraordinary attention from the Legal Department in 1948.

Studies of the Colorado River Upper Basin States' Compact were participated in and discussions had with representative of the Upper Basin States for the purpose of trying to interpret the language of the Compact and to determine its effect, if any, on the interests of the State of California.

Imperial Irrigation District's interest in protecting its water rights under State law, which fundamentally attaches the water to the land, caused the District to make available to the Irrigation Districts Association of California the services of the Legal Department in connection with the validation suit of the Lindsay-Strathmore Irrigation District. In this suit the question was raised as to the right of an Irrigation District to enter into a utility contract for the purchase of water from the Federal Government, and

to waive for the lands of the District their permanent rights to the use of the water. A brief was filed on behalf of the Irrigation Districts Association, with the permission of the Court, for the purpose of determining the propriety of the Court's allowing the Association to file a brief in the case as a friend of the Court. The Court ruled against the right of the Association to file such a brief, on the ground that other districts' rights were not involved in the Lindsay-Strathmore contract.

The Department took part in several conferences in connection with working out the Net Proceeds Formula pursuant to the provisions of the District's All-American Canal contract with the Interior Department of the United States.

Studies were made, and numerous discussions had with officials of the Bureau of Reclamation in reaching an agreement as to what remaining structures the All-American Canal contract requires the Bureau of Reclamation to build, and how to effect performance thereon, to enable the Secretary of the Interior to make a determination of completion so that the section of the Coachella Branch, which the contract stipulates the District is to operate and maintain, can be turned over to the District in accordance with the contract. The seriousness of this problem lies in the fact that without finishing the canal, the Bureau has spent all the money which the contract allows to be spent.

Detail studies were made and conferences held with officials of the Bureau of Reclamation, the State Department, and the International Boundary and Water Commission for the purpose of exploring the possibilities of securing the enactment of legislation which would result in the District recovering on its investment in the levee system in Mexico. This levee was constructed in pre-Boulder Dam days to protect the valley from floods.

The Department completed three condemnation suits which the District had to institute to acquire right of ways. In addition to the routine right-of-way work for relocation of and extensions to the irrigation and drainage works, the Department assisted in the acquisition of the right of way for the transmission line from El Centro to Coachella. This work was complicated by the Indian lands involved. The transmission line was constructed as a part of the 1945 Power Project.

Numerous construction and material contracts under the 1945 Power Project were awarded during the year. Evaluating bids for the letting of these contracts, and the necessary closing and completion actions entailed considerable work.

Emphasis was placed on completing quiet title actions which had been delayed by wartime conditions. Of the seventy-four quiet title actions carried over on January 1, 1948, and the forty-two new actions instituted during 1948, forty-four were completed. All of these actions were in connection with furnishing merchantable titles for parcels of tax deeded land sold by the District.

VI. ALL-AMERICAN CANAL

(a) Operation and Maintenance:

Routine operation and maintenance of the All-American Canal to Imperial Valley below Pilot Knob was carried on throughout 1948 by the All-American Canal Division of the Water Distribution and Drainage Construction Department. Headquarters for this division remained in Calexico, since a final decision had not been reached by Federal authorities as to when the remainder of the main canal would be turned over to the District. Location

of a permanent office site was also being delayed until such time as an agreement, as to maintenance and operation of the south end of the Coachella branch, could be reached.

Expenditures for operation and maintenance for the year amounted to \$265,383.

A new Bucyrus 38-B was received and started operations on the berming of the canal at the railroad north of Calexico and working upstream, berming forty miles on the canal and cleaning one mile of drain.

On grading operations, 194 miles were graded on the canal and one mile on drains. Burning operations required 179,130 gallons of oil and covered 1,011 miles. There were 19,090 gallons of oil used for moss control covering 76 miles. Seepage control by oil method was used at one location on 5,000 lineal feet of canal, requiring 2,240 gallons of oil.

Two crews were required during the year on general maintenance of gates or control structures, sandblasting and painting metal parts, replacement of hoist cables and general repairs.

Revetment around structures and at points where control of erosion was necessary required 7,500 cubic feet of rock.

During the year, 2,977,815 feet of water were received below Pilot Knob Check. Of this amount, 164,788 acre-feet were delivered to the Coachella Canal Turnout at Drop No. 1; 37,247 acre-feet were delivered to Experimental Farms Nos. 1 and 2; and 1,677,000 acre-feet were delivered to ranches within the present irrigated area.

(b) Bard Area Investigation:

Drainage work in the Bard area was confined to the reading of existing test wells and recording and transmitting of data obtained.

VII. EAST MESA

(a) Farm No. 1:

Eady Brothers Farming Company of Calexico continued to operate Farm No. 1 under the provisions of their lease with the District.

The entire acreage was planted to alfalfa and yields from both hay and seed crops compared favorably with results obtained elsewhere in Imperial Valley.

Continued public interest in the progress being made at both Farm No. 1 and Farm No. 2 is indicated by the number of visits to these units sponsored by various local civic groups. In addition to the local interest, nation-wide interest has been created by the American Legion in their efforts to obtain permission to open the East Mesa lands surrounding these farms for settlement by veterans.

(b) Farm No. 2:

The main canal with a capacity of 300 cubic feet per second and a lateral with a capacity of 85 cubic feet per second were completed on April 21, 1948.

All bids for leveling were rejected on the basis that they were too high, and a contract was entered into with Foster and McHarg of Riverside, for leveling and grading of the northwest 160 acres. By July, 40 per cent of this work had been completed, and an agreement had been made whereby Foster and McHarg would level and grade the entire 480 acres. In October, crops had been planted on 240 acres. These crops included sesbania, alfalfa, berseem clover planted with barley, black-eyed peas, and Canadian field peas.

Plans for carrying on experiments in irrigation by use of a sprinkler system were well under way, and materials for this project were expected to arrive early in 1949.

All grading on 400 acres had been completed by the end of the year, and 320 acres had been planted.

VIII. NORTH END IMPROVEMENT PLAN

Before the close of the year 1948, connection was made between the end of the Rockwood Canal and the Vail Canal to substitute delivery of water through the Rockwood for delivery from the Alamo River whenever capacity is available in the Rockwood.

Engineering studies have been carried on during the year comparing costs of (a) the previously contemplated permanent new tie-in canal between the Highline Canal and the Alamo River crossing to the Vail Canal: (b) tying laterals Nectarine, "B," and Nutmeg to the Vail Canal on (1) a temporary basis, and (2) on a permanent basis. It is anticipated that a decision will be made during the year 1949, and work started on whichever of these projects is finally decided upon.

IX. COLORADO RIVER BOARD

After extensive hearings, the Bill to authorize the Attorney General of the United States to bring suit against the States of Nevada, Arizona, and California to determine the respective rights of each state to Colorado River water, died in Committee at the close of the 80th Congress. The Bill to authorize what is commonly known as the Central Arizona Project met the same fate as the Litigation Bill. When the 81st Congress convenes, the California Colorado River Board will introduce a revised Litigation Bill,

and we have been informed that Arizona will either reintroduce the Central Arizona Project Bill, or a Revised Bill covering the project.

The Colorado River Board co-operated with the State Engineer and the Division of Water Resources in preparing comments on the Central Arizona Project to be filed by the State of California in accordance with the Flood Control Act of 1944. A comprehensive 159-page analysis supports these conclusions and recommendations of the report:

(a) Conclusions:

1. The plan for construction, operation and maintenance of the Central Arizona Project as proposed in the Project Planning Report No. 3-8b.4-2, dated December, 1947, is not financially feasible under existing Federal reclamation law and the modifications thereof considered herein.

In this connection, attention is called to a statement in paragraph 32 of the Regional Director's letter, dated December 19, 1947, which reads as follows:

"After considering the power marketing conditions in this area, the conclusion has been reached that the Central Arizona Project is infeasible under the terms of the existing Reclamation Project Act."

2. Consideration of an authorization for the Central Arizona Project should be withheld until a determination has been made of the respective rights of the Lower Basin States to the waters of the Colorado River system.

3. The Bureau of Reclamation should make extensive and detailed studies and investigations, and make a report thereon of local water supply and use, in order to determine accurately the amount of supplemental water needed for the existing irrigated lands in the Salt River and Middle Gila River Valleys, and to formulate plans for additional conservation of local water supplies,

including possibilities of conserving and utilizing water now consumed by native vegetation, which, according to estimates of the United States Geological Survey, amounts to 200,000 to 350,000 acre-feet annually.

(b) Recommendations:

1. It is recommended (a) since the feasibility of the Central Arizona Project is dependent upon an assured and adequate water supply from the Colorado River; (b) since the extent of such supply hinges upon the interpretation of the Colorado River Compact, Boulder Canyon Project Act, and relevant statutes, decisions, and instruments; and (c) since the interpretations of those documents is a controversial matter between the Lower Basin States; that further consideration of any proposal for the diversion of water from the Colorado River into central Arizona, such as the Central Arizona Project as proposed by the Secretary of the Interior in Project Planning Report No. 3-8b.4-2, dated December, 1947, be deferred until a determination has been made of the respective rights of the Lower Basin States to the waters of the Colorado River System.

2. It is recommended that the Bureau of Reclamation of the Department of the Interior be authorized and directed to make a thorough and comprehensive investigation of the local water supplies, both surface and underground, and their utilization in central Arizona, and render a report thereon, with the objective of determining (1) the extent and location of the lands irrigated at the present time in the Salt River and Middle Gila River valleys in need of a supplemental water supply, and (2) the amount of supplemental water needed, if any, for the existing irrigated lands in the Salt River and Middle Gila River valleys, and the means and the cost of securing such supplemental water supply, including consideration of

possibilities for additional surface storage strategically located, more efficient utilization of existing ground-water storage capacity, and utilization of local water supplies now consumed by native vegetation.

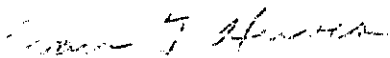
At the end of the year, the report had not been filed by Governor Earl Warren on behalf of the State of California.

Professor Franklin Thomas was elected Chairman of the Board and Colorado River Commissioner for 1948-49, replacing the writer who remains a member of the Board.

X. CONCLUSION

I am deeply grateful to my fellow directors, the officers of the District and all the members of the organization for their individual and combined contribution to the successful planning, administration, and execution of our 1948 program.

I am also deeply grateful to the people of the Valley for the assistance, co-operation, and confidence which they have given their District during 1948, and all the preceding years.


EVAN T. HEWES
President Board of Directors

23- 49

1911

1949

IMPERIAL IRRIGATION DISTRICT
ANNUAL REPORT BY THE PRESIDENT OF THE BOARD OF DIRECTORS
JANUARY 1, 1950
- - - - -

DIRECTORS

Evan T. Hewes, President of the Board
Charles Morrow Mack Trentham
Jack Bryant Ollie Stewart
- - - - -

ASSESSOR-COLLECTOR

C. J. Park

SECRETARY

G. L. Dermody

TREASURER

Anna T. McManus

El Centro, California
January 1, 1950

To the
Board of Directors of Imperial Irrigation District
and to the People We Serve

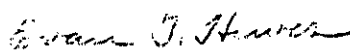
As President of the Board of Directors of Imperial Irrigation District, I am pleased to submit herewith a review of District operations and progress for the year ended December 31, 1949.

There is continuous development within the area served by Imperial Irrigation District, and the District must likewise increase and develop its facilities so that no part of this development will be retarded for lack of adequate and dependable water and power service.

We have endeavored to forecast these requirements in order to determine facilities necessary to serve the growing volume of business, and to provide a prudent margin of capacity in advance of customer demands. Part of this program was presented to you early this year as the 1949 Power Development Project.

The report which follows shows that the District's operations are becoming increasingly efficient. New and improved methods, adopted after studies of construction problems, have resulted in reduced construction costs and more efficient service to you.

To the officers and employees of the District and to you, the people of the Valley, go full credit for these accomplishments.


EVAN T. HEWES, President
Board of Directors

GENERAL INFORMATION ON DISTRICT ORGANIZATION

1911 - 1949

Imperial Irrigation District Organized 38 Years Ago

Imperial Irrigation District is a public corporation organized in 1911 under the California Irrigation District Act, as supplemented and from time to time amended (now codified as Division 11 of the Water Code of California); and since that date, the District has been continuously in operation. The governing board is composed of five directors, each elected from a separate geographical division of the District, by the qualified electors living therein, for a term of four years. The other elective officers are the Treasurer and Assessor-Collector.

The District is located entirely in Imperial County, and includes all of the cultivated lands in the Imperial Valley. In 1942, the District annexed (but does not assess) approximately a quarter of a million acres of undeveloped public land in the East, West, and Pilot Knob mesas. These lands are to be irrigated in the future from the All-American Canal. The District is the largest irrigation district in the United States, with a present gross area of 882,788 acres. Under full development, it is estimated that about 770,000 acres within the District will be irrigated.

The District has three chief functions: (a) diversion and delivery of Colorado River water for irrigation and domestic use, (b) operation and maintenance of drainage canals and facilities, and (c) generation and distribution of electricity.

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FOREWORD

At the biannual reorganization of the District Board following the election in February, Jack Bryant was officially seated as director of the third division, or Calipatria-Nilañd area, replacing B. F. Grubel. All other directors remained unchanged.

On January 28, 1949, C. J. Park was appointed Assessor-Collector to serve on a temporary basis, pending selection of an Assessor-Collector to fill the vacancy caused by the death of the late W. A. McFadden. On July 26, 1949, Mr. Park accepted the appointment to fill Mr. McFadden's unexpired term scheduled to terminate in March, 1951.

On August 1, 1949, the Board of Directors made effective the first major reorganization changes in the District since 1944.

Under the new set up, which did not involve employment of any additional help, a new position was created, classified as Civil Engineer. The Chief Operating Engineer was changed to Chief Electrical Engineer, and the Electrical Designing Engineer became Planning Engineer - Electrical.

The net result accomplished by these reorganization changes was a redistribution of the work of the three departments affected, making it possible to handle more work by the Civil Engineering Department and the Chief Electrical Engineer's Department; thereby, allowing the Planning Engineer - Electrical to devote more time to the planning work required to keep up with the ever expanding electrical system. Nine major departments now operate under the direct supervision of the Executive Engineer.

The District's new 20,000-kilowatt steam-electric generating station in El Centro was formally inaugurated for service April 25, 1949. This was the first major item to be completed under the 1945 Power Development Program. Because of

the increased demand for power, it will be operated more as a base load plant than as a quick pickup stand-by as originally intended. The El Centro-Coachella Transmission Line and the El Centro Switching Station were other major projects of the 1945 program that were completed in 1949. All other phases of the program are expected to be complete by early 1950.

On June 15, 1949, the electors of Imperial Irrigation District voted by a majority of more than 80 per cent to authorize an issue of \$12,500,000 power revenue bonds to finance urgently needed additions and betterments to the expanding electrical system.

The first division of \$6,000,000 was bid in on August 23, 1949, by Blyth and Company, Inc., who was the lowest of three bidders. Interest rate submitted by the successful bidder was an average of 2.89 per cent. Before the end of the year, contracts had been awarded for the turbine-generator unit, the cooling tower and the condenser unit of the second unit of the steam-electric generating unit located at El Centro. The second unit is one of the major projects of the 1949 Power Development Program.

One of the most important projects completed in the irrigation division was the first stage of the revamping of the water supply facilities of the Vail Canal system. This included construction of three siphons, crossing under the Alamo River, two drops, four checks, and several other miscellaneous structures, and realignment of the Alamo River channel for a distance of one-half mile.

I. FINANCIAL

(a) Statement of Condition:

Changes in the District's long-term indebtedness for the calendar year ended December 31, 1949, are reflected in the following tabulation prepared by Treasurer Anna T. McManus:

BONDED INDEBTEDNESS

	Total Indebtedness <u>Dec. 31, 1948</u>	Tenth Issue Bonds Issued	Retired	Total Indebtedness <u>Dec. 31, 1949</u>
General Obligation Bonds	\$13 515 000 00		\$125 000 00	\$13 390 000 00
Power Revenue Bonds	<u>14,089 000 00</u>	<u>\$6 000 000 00</u>	<u>324 000 00</u>	<u>19 765 000 00</u>
	\$27,604 000 00	\$6 000 000 00	\$449 000 00	\$33 155 000 00

NOTE: \$90,802.62, First Refunding Bonds and Warrants, not included in the above. Said bonds and warrants were called for retirement July 1, 1943, and funds set aside for their retirement.

Some of the factors affecting the financial condition of the District during 1949 were:

- (1) Net revenue from the irrigation division increased \$541,001 from that of the previous year. This net increase resulted principally from the increase in water rates from \$1.25 to \$1.50 per acre foot, which accounted for \$357,295; sale of a large amount of rock from Andrade Quarry amounted to \$99,409; and a general reduction in operating expenditures of \$91,867.
- (2) Kilowatt-hour sales increased approximately one-third over 1948 sales, but the average sale price per kilowatt-hour decreased, principally because of larger use of power under the volume rate schedules which provide a reduction in rates for volume consumers; however, net power rates increased approximately \$570,000 over 1948. Net revenue decreased as a result of additional generation and operation costs, additional interest and depreciation.
- (3) Total operating revenue deductions for all divisions increased only \$27,530 over 1948.
- (4) Net revenue from all divisions increased \$406,654 over 1948.

The sound financial condition of the District at the close of the year is indicated by the financial reports appearing on the next few pages of this report.

POWER DIVISION

	<u>1949</u>	Over <u>1948</u>	Under <u>1948</u>
1. Operating Revenue	\$ 4 155 323	\$ 573 627	
2. Operating Deductions	<u>2 666 688</u>	641 052	
3. Operating Income	\$ 1 488 635		\$ 67 425
4. Other Income	<u>42 397</u>	4 890	
5. Gross Income	\$ 1 531 032		62 535
6. Income Deductions	<u>320 678</u>	50 293	112 828
7. Net Income, or Current Earned Surplus	<u>\$ 1 210 354</u>		
1a. Current Assets	\$ 2 596 502	1 207 548	
2a. Investment and Fund Accounts	8 145 295	3 498 929	
3a. Fixed Assets	17 951 321	2 193 211	
4a. Other Assets and Deferred Charges	511 849	124 213	
5a. Current Liabilities	677 848	86 183	
6a. Long-Term Liabilities	19 390 000	5 625 000	
7a. Deferred Credits and Reserves	336 601	94 973	
8a. Surplus	8 800 518	1 217 745	

WATER DIVISION

(Accounts of Subsidiary Mexican Company not Included)

	<u>1949</u>	Over <u>1948</u>	Under <u>1948</u>
1. Operating Revenue	\$ 4 310 217	\$ 423 345	
2. Operating Deductions	<u>2 375 291</u>		\$149 913
3. Operating Income	\$ 1 934 926	573 258	
4. Other Income	<u>38 350</u>		1 612
5. Gross Income	\$ 1 973 276	571 646	
6. Income Deductions	<u>464 289</u>		9 599
7. Net Income, or Current Earned Surplus	<u>\$ 1 508 987</u>	581 245	
1a. Current Assets	\$ 3 468 085		611 100
2a. Investment and Fund Accounts	2 170 899	251 347	
3a. Fixed Assets	17 020 720	850 027	
4a. Other Assets and Deferred Charges	546 701	69 963	
5a. Investment in Subsidiary Mexican Co.	7 945 399		
6a. Current Liabilities	751 771		443 230
7a. Long-Term Liabilities	13 340 803		307 012
8a. Deferred Credits and Reserves	1 492 694		190 410
9a. Surplus	15 566 536	1 500 889	

CASH AND FUND BALANCES:
DECEMBER 31, 1949 AND DECEMBER 31, 1948

	December 31 1949	December 31 1948	Increase or Decrease*
<u>IRRIGATION OPERATING FUNDS:</u>			
Assessments Collected for Following Year	\$ 218 799	\$ 339 434	\$ 120 635*
Other Cash Balances	1 732 749	2 269 453	536 704*
Total Cash and Fund Balances	\$ 1 951 548	\$ 2 608 887	\$ 657 339*
<u>COMPANIA OPERATING FUNDS:(1)</u>			
Compania General Fund	\$ 20 275	\$ 1 763	\$ 18 512
Compania Reserve Fund	-	47 308	47 308*
Total Cash and Fund Balances	\$ 20 275	\$ 49 071	\$ 28 796*
<u>IRRIGATION BOND AND WARRANT FUNDS:</u>			
Assessments Collected for Following Year	\$ 499 718	\$ 507 080	\$ 7 362*
Other Cash Balances	840 724	655 428	185 296
Total Cash Balances	\$ 1 340 442	\$ 1 162 508	\$ 177 934
Less Unpaid Matured Principal and Interest	(136 328)	(141 928)	5 600*
Less Int. Maturing next January 1	(228 075)	(230 159)	2 084*
Less Bonds Called for Redemption Next Jan. 1	(210 000)	(40 000)	(170 000)
Total Fund Balances	\$ 766 039	\$ 750 421	\$ 15 618
<u>DRAINAGE FUND:</u>			
Assessments Collected for Following Year	\$ 115 319	\$ 116 966	\$ 1 647*
Other Cash Balances	65 807	2 050	63 757
Total Cash and Fund Balances	\$ 181 126	\$ 119 016	\$ 62 110
<u>MISCELLANEOUS IRRIGATION FUNDS:</u>			
Total Cash and Fund Balances	\$ 649 331	\$ 638 028	\$ 11 303
<u>POWER OPERATING REVENUE FUNDS:</u>			
Cash Balances	\$ 1 413 564	\$ 335 995	\$1 077 569
Due from Power Construction Fund	-	750 262	(750 262)*
Fund Balances	\$ 1 413 564	\$ 1 086 257	\$ 327 307
<u>POWER BOND FUNDS:</u>			
Cash Balances	\$ 1 671 264	\$ 1 056 333	\$ 614 931
Less Unpaid Matured Bond Interest	(2 951)	(2 529)	(422)
Less Interest Maturing next Jan. 1	(236 007)	(197 982)	(38 025)
Less Bonds Maturing next Jan. 1	(212 000)	(162 000)	(50 000)
Fund Balances	\$ 1 220 306	\$ 693 822	\$ 526 484
<u>POWER CONSTRUCTION FUNDS:</u>			
Cash Balances	\$ 5 680 925	\$ 2 808 616	\$2 872 309
Due Power Revenue Fund	-	(750 262)	750 262*
Fund Balances	\$ 5 680 925	\$ 2 058 354	\$3 622 571
<u>MISCELLANEOUS POWER FUNDS:</u>			
Cash and Fund Balances	\$ 793 107	\$ 781 418	\$ 11 689
<u>ALL FUNDS:</u>			
Assessments Collected for Following Year	\$ 833 836	\$ 963 480	\$ 129 644*
Other Cash Funds	12 867 746	8 596 392	4 271 354
Total Cash Balances	\$13 701 582	\$ 9 559 872	\$4 141 710
Less Bond Principal and Interest Due Jan. 1	1 025 361	774 598	250 763
TOTAL FUND BALANCES	\$12 676 221	\$ 8 785 274	\$3 890 947

() Deduction

*Decrease

(1) Funds of Subsidiary Company in Lower California, Mexico

IMPERIAL IRRIGATION DISTRICT
And Compañia de Terrenos y Aguas de la Baja California, S.A.
CONSOLIDATED REVENUE AND EXPENSE STATEMENT
JANUARY 1 TO DECEMBER 31, YEAR 1949

	<u>Consolidated</u>	<u>Imperial Irrig. District</u> <u>Power Div.</u>	<u>Irrig. U.S.</u>	<u>Compañia</u> <u>de T. y A.</u> <u>Irrig. Mex.</u>
<u>REVENUE</u>				
<u>OPERATING REVENUES:</u>				
Realized Revenue from:				
Current Year Assessments	\$1 392 974		\$1 392 974	
Penalties and Costs	5 014		5 014	
Redemption of Delinquent Assessments	49 158		49 158	
Interest Coll. on Redemptions	<u>4 736</u>		<u>4 736</u>	
Total Collected by Assessor-Collector	\$1 451 882		\$1 451 882	
Sales of Land Held under Assessment Deeds	32 136		32 136	
Equivalent of Current Assessments on Tax Deed Land	23 379		23 379	
Rental of Land Held under Assessment Deeds	1 632		1 632	
Interest on Land Sales Contracts	<u>3 492</u>		<u>3 492</u>	
Total Revenue Derived from Assessments	\$1 512 521		\$1 512 521	
Water Sales	2 583 666		2 341 726	\$241 940
Gate Service Charges	47 313		47 313	
Pipe Service Charges	8 467		8 467	
Landowners' Share of Construction Costs	35 623		35 623	
Rental of Buildings	37 062	\$ 6 747	30 315	
Rental and Sales of Operative Land	12 639		12 639	
Rental of Equipment	12 600		12 600	
Sales of Rock from Andrade Quarry	110 000		110 000	
Discount on Second Refunding Bonds Redeemed	406		406	
<u>Power Sales:</u>				
Residential or Domestic Sales		1 503 176		
Rural Sales - Agricultural Power		474 921		
Commercial and Industrial Sales		1 708 489		
Public Street and Highway Lighting		21 316		
Other Sales to Public Authorities		56 354		
Sales to Other Electric Utilities		338 652		
Interdepartmental Sales		<u>40 273</u>		
Total Power Sales	4 143 181	\$4 143 181		
Sales of Water Delivered at Boundary (Inter-Div.)			(196 909)	
Miscellaneous Revenue	<u>7 389</u>	<u>5 395</u>	<u>1 698</u>	<u>296</u>
TOTAL OPERATING REVENUES	\$8 510 867	\$4 155 323	\$4 310 217	\$242 236

	Consolidated	Imperial Irrig. District Power Div.	Irrig. U.S.	Compañia de T. y A. Irrig. Mex.
Total Operating Revenue - Brt. Fwd.	\$8 510 867	\$4 155 323	\$4 310 217	\$242 236
<u>OPERATING REVENUE DEDUCTIONS:</u>				
<u>Operating Expenses:</u>				
Oper. & Maint. of Irrig. System	\$2 218 183		\$2 104 622	\$113 561
Oper. & Maint. of Power System:				
Production Expenses		\$ 757 515		
Power Purchases		401 109		
Transmission Expenses		87 202		
Distribution Expenses		399 432		
Accounting and Collecting Expenses		157 662		
Sales Promotion Expenses		57 647		
Administrative and Gen. Expenses		292 576		
Total Power Oper. and Maint.	2 153 143	\$2 153 143		
Expense of Tax Deed Land Sales and Rentals	22 657		22 657	
Uncollectible Accounts	6 784	3 000	3 784	
Employees' Group Insurance and Pension Expense	113 317		113 317	
Misc. Exp. and Loss on Exchange	53 497		2 330	51 167
Cost of Water Deld. at Boundary - (Inter-Div.)				(196 909)
Cost of Water Deld. at Boundary - (Loss on Exchange)	8 525			8 525
Total Operating Expenses	\$4 576 106	\$2 156 143	\$2 246 710	\$370 162
<u>Depreciation of:</u>				
Equipment and Facilities	31 753		30 734	1 019
Buildings	19 862		19 862	
Power System	464 882	464 882		
Amort. of Canal System and Defense Works, Mexico	145 555			145 555
Amort. of Plant Acquisition				
Adjustment	35 967	35 967		
Losses on Sales and Retirement of Assets	77 520		77 520	
Taxes	11 275	9 696	465	1 114
Total Operating Revenue Deductions	\$5 362 920	\$2 666 688	\$2 375 291	\$517 850
Net Operating Revenue	\$3 147 947	\$1 488 635	\$1 934 926	\$275 614*
<u>OTHER INCOME:</u>				
Int. on U. S. Bonds and Treasury Certs. and Notes	\$ 65 508	\$ 31 583	\$ 33 925	
Int. on Bank Deposits & Misc. Int.	15 239	10 814	4 425	
Rental of Other Physical Property	-			
Total Other Income	\$ 80 747	\$ 42 397	\$ 38 350	
GROSS INCOME	\$3 228 694	\$1 531 032	\$1 973 276	\$275 614*
<u>INCOME DEDUCTIONS:</u>				
Interest on District Bonds	\$ 777 919	\$ 320 678	\$ 457 241	
Amortization of Debt Discount	7 048		7 048	
Total Income Deductions	\$ 784 967	\$ 320 678	\$ 464 289	
NET INCOME - EARNED SURPLUS CURRENT YEAR	\$2 443 727	\$1 210 354	\$1 508 987	\$275 614*

*Deficit

(b) 1948-49 Assessment:

The annual assessment levy for the District was set at \$3.50 per \$100.00 of assessed valuation for the 1948-49 assessment year. The new levy is the same as that imposed for each of the past five years, but is based on a valuation higher than that of the 1947-48 assessment year. The aggregate assessed value of the lands within Imperial Irrigation District as equalized, is the sum of \$41,534,362.00, which is an increase of \$1,095,878.00 over the preceding year's total.

The \$3.50 levy is designed to raise a total of \$1,235,300.00 for the 1948-49 assessment year, which is \$32,795.00 more than last year's assessment of \$1,202,504.00.

The breakdown classification for the total amount to be raised by assessment for the 1948-49 assessment year is as follows:

Drainage Fund: 4.25 mills on the dollar to raise \$150,000.00 for necessary improvements and extensions to the drainage system of the District.

Redemption Fund: 18.42 mills on the dollar to raise \$650,000.00 to pay interest on bonds and to provide for their retirement.

Operation and Maintenance Fund: 12.33 mills on the dollar to raise \$435,300.00 which with other revenues of the District, including water tolls, will provide funds for operation of the District during the 1948-49 assessment year.

(c) Assessor-Collector's Office:

Collections for the year 1948-49 were good, the percentage of delinquency at date of sale being 4.06, as compared to 3.02 for the 1947-48 year. The percentage uncollected on the first installment as of the delinquency date in December was 8.45, as compared to 8.80 for 1947-48. There remained 60.79 per cent to be collected on the second installment, as compared to 58.49 per cent for the previous year, and for the entire assessment, 34.62 per cent was uncollected, as compared with 33.64 per cent for the previous year.

Outside work was accomplished without employing extra help, and with the progress being made on the coming assessment, it will not be necessary to have additional help this year.

The 1948-49 total valuation increased \$1,095,878.00; however, this was done without raising the basic value of the land, but is mostly due to property sold by Imperial Irrigation District, upon which contracts were completed and land returned to the tax rolls.

I. FINANCIAL (Continued)

(d) Treasurer's Office:

In addition to the general office work of the Treasurer's office, the following business was handled during the year 1949:

64,151 bonds and coupons were paid, for which
819 checks were issued and involving an ex-
penditure of \$ 1 301 520 00

Cashier, pay roll, Compañia pay roll, and expense
checks amounting to 37,466 checks and involving
an expenditure of 9 276 141 32

Total Expenditures \$10 577 661 32

INVESTMENTS

Total U. S. Securities - December 31, 1948 \$ 3 977 000 00
U. S. Securities purchased - 1949 3 040 000 00
Total U. S. Securities \$ 7 017 000 00

Less U. S. Securities cashed - 1949 700 000 00
Total U. S. Securities - December 31, 1949 \$ 6 317 000 00

INTEREST EARNED

Interest earned on U. S. Securities \$ 75 319 00
Interest earned on Bank Deposits 26 167 00
Total Interest Earned - Year 1949 \$ 101 486 00

INCINERATION CERTIFICATE

Cremated Securities: June 24, 1949
Covering Period: January 1, 1948 - December 31, 1948
Securities Destroyed: 622 Bonds, 77,164 Coupons

I. FINANCIAL (Continued)

(e) Auditor's Report:

The auditor's report, covering 1948 operations, was received on May 24, 1949.

Gross revenue for all divisions of the District totaled \$7,651,967, as compared to \$6,833,766 for 1947. Total expenses amounted to \$5,700,975, as compared to \$4,835,011 for the previous year. Net revenue was \$1,950,992, or a decrease of \$47,763 for the year. Net revenue from the various divisions was as follows: U. S. Irrigation Division, \$904,910; Power Division, \$1,308,658; and for the Compañia de Terrenos y Aguas, a loss of \$262,576.

The following tabulation sets forth the assets and liabilities of the District, as recorded by the auditors, and gives for comparison the previous year's standing:

		<u>Irrigation</u>	<u>Power</u>	<u>Compañia</u>
Assets	- 1948	\$30 592 964	\$22 213 523	\$3 607 676
	- 1947	29 466 822	21 142 306	3 989 328
Liabilities	- 1948	16 503 329	14 650 833	8 421 311
	- 1947	16 350 030	14 903 576	8 510 824
Surplus	- 1948	14 089 635	7 562 690	4 813 635*
	- 1947	13 116 792	6 238 730	4 521 490*

*Deficit

The decrease of \$79,502 in net revenue for the irrigation division (U.S.), in 1948, is due to the continued heavy operation and maintenance program, which resulted in an increase of operating expense in the amount of \$419,814, for the year 1948 over 1947.

I. FINANCIAL (Continued)

Other factors affecting the net revenue of the irrigation division (U.S.)

were:

Assessment Revenue Decreased	\$ 23 178*
Water Sales Increased	351 303
Miscellaneous Revenue Increased	<u>4 427</u>
Total Revenue Increased	\$332 552
Operating Expenses Increased	\$419 814
Financial Costs Decreased	<u>7 760*</u>
Total Costs Increased	\$412 054
Net Revenue Decreased	\$ 79 502

*Deduction

The net revenue for the power division for 1948 amounted to \$1,308,658, as compared with a net revenue of \$1,133,365 for the previous year. The net power sales for 1948 amounted to \$3,572,019, as compared with sales of \$3,057,296 in 1947. This represented an increase of approximately \$515,000 over sales for the previous year. This increase in sales was partially offset in the amount of \$320,000 for increased operating expenses for the year. The increase in net revenue, in the amount of \$176,000, is an approximate increase of 15 per cent in net revenue.

The total number of kilowatt-hours sold increased approximately 20 per cent over the 1947 sales. The average selling price and the operating, maintenance, and overhead expense remained approximately the same for the two years.

A comparison of the two years is as follows:

	<u>1948</u>	<u>1947</u>
Net Power Sales	\$3 572 019	\$3 057 296
Other Revenue	<u>47 176</u>	<u>46 095</u>
Total Revenue	\$3 619 195	\$3 103 391
Operating Expenses	<u>2 040 152</u>	<u>1 690 954</u>
Net Revenue from Operations	\$1 579 043	\$1 412 437
Financial Costs	<u>270 385</u>	<u>279 073</u>
Net Revenue	\$1 309 658	\$1 133 364
1948 Increase	\$ 176 294	

II. OPERATION AND MAINTENANCE OF WATER DISTRIBUTION

(a) General Comment:

The expenditures on the operation and maintenance of the main canals, lateral canals, and drain systems were \$1,558,839, compared to \$1,598,000 for the year 1948.

The pay roll for the eight operating divisions was \$823,680, compared to \$716,906 for year 1948.

There were 1,641,543 acre-feet of water delivered to the water users in 200,973 runs, in addition to which, 21,214 heads of stock water were delivered.

No difficulty occurred on the system of sufficient importance to require any major cutouts of water, and no delays were experienced on the delivery of water to the water users as ordered.

The erosion on channels continued active, with a degree of lessened intensity compared to the period immediately following the diversion of desilted water into the system. The more active sections were on the steeper slopes on the lateral canal channels, and on the larger canals.

The continued activity on the channels required the continuation of work on the protection of the existing structures and the construction of checks and drops to control recession on the channels.

On the maintenance of the lateral canal and lateral drain systems, 628 miles of channels were cleaned with bucket-line machines and 198 miles with dragline dredges. There were 1,815 miles of banks graded in connection with the maintenance work on channels and operational roads.

On the All-American Canal, the operation of the Bucyrus 38-B was continued on the removal of heavy berm, completing 19 miles and spending 142 machine-hours on special work shaping the banks.

On grading operations, 87 miles of bank were graded and 496 hours spent on special work shaping the banks.

Two maintenance crews continued operations on reconditioning, sandblasting, and painting control gates on drops and checks to control corrosion of the metal coming in contact with the water.

One barrel of the New River siphon was dewatered for inspection. The corrosion found required the sandblasting and painting of the inside walls necessary to control action of water on the metal. This work required the sandblasting of 17,500 square feet and 470 gallons of paint to recondition the interior walls of one unit of the siphon.

Operational road maintenance required importing 3,643 cubic yards of clay, 1,137 miles with patrol grader, and 929 miles with sprinkler truck.

There were installed 63 new 2-inch test wells on the East Mesa and 79 existing wells reconditioned, requiring 1,037 man-hours.

On the maintenance of lateral canal and drain structures, minor repairs were made on 843 delivery gates, 538 checks, 89 bridges, 10 siphons, 4 spillways, and 4 drops.

Major repairs were made on 241 delivery gates, 133 checks, 45 bridges, 5 siphons, 3 spillways, and 1 special drain structure, making a total of 1,916 structures which required various degrees of repair work.

There were 22 new field waste pipes installed and 51 replaced, requiring 3,140 lineal feet of pipe and 73 well boxes.

Nine miles of farm fence were moved in connection with additional right of way on lateral canals and drains.

On river channel maintenance, 674 man-hours and 24 machine-hours were spent by division crews.

On revetment work below structures and bank protection, 13,038 cubic yards of rock were required.

On rodent control work, 117,824 gas bombs were required on 3,162 miles of control work, and 7,012 man-hours were required on patrolling of the canals as compared to 8,560 man-hours for year 1948.

Work performed for the water users on advance deposits amounted to \$52,219, compared to \$61,252 for year 1948.

(b) Construction:

The expenditures on additions and betterments on the canal system were \$496,807, compared to \$267,789 for year 1948. Of the total expenditures, \$104,461 was expended on main canals, \$193,675 on lateral canals, \$43,439 on County road crossing structures, \$10,000 on Salton Sea Contract, \$6,038 on telephone lines, \$96,961 on the Vail Canal and Alamo River Crossing, and \$42,233 on overhead and general expense.

The location of the major structures constructed were:

(1) East Highline Canal:

- a. Replacement of the Magnolia turnout with concrete intake and 72 feet of 48-inch diameter reinforced concrete pipe conduit, and concrete outlet transition.
- b. Replacement of Narcissus Lateral Canal turnout with concrete intake and 72 feet of 42-inch diameter reinforced concrete pipe conduit, and concrete outlet transition.
- c. Replacement of two direct deliveries from the main canal with concrete intakes and 48 feet of 30-inch diameter reinforced concrete pipe conduit.

(2) Central Main Canal:

- a. Drop No. 1-A - Construction of reinforced concrete weir-type drop structure 1.36 miles below Double Weir Check. Width of weir, 52 feet; height of weir, 10 feet; height of side walls, 14'5"; over-all length of structure, 40 feet.

The construction of this structure required the relocation of 1.36 miles of the Dogwood Canal and .50 of a mile of the Strout Drain, and, also, the shaping and widening of 1.36 miles of channel on the Central Main Canal.

(2) Central Main Canal: (Continued)

- b. Drop No. 9 - Construction of reinforced concrete weir-type control drop structure .75 of a mile above No. 4 Heading. Width of weir, 26 feet; height of weir, 9 feet; height of side walls, 13 feet; over-all length of structure, 35 feet.

The construction of Drop No. 9 required the relocation of .50 of a mile of the North Central Drain, and 1.25 miles of the North Eucalyptus Canal, and the widening of 1.50 miles of the Central Main Canal channel.

(3) West Side Main Canal:

- a. Replacement of Trifolium Lateral 10 Canal turnout with concrete intake and 48 feet of 36-inch diameter reinforced concrete pipe conduit and concrete outlet transition.
- b. Replacement of Thistle Lateral 8 Heading with concrete intake, 64 feet of 48-inch diameter reinforced concrete pipe conduit, and concrete outlet transition.
- c. Construction of Trifolium Extension Canal siphon. Double-barrel 48-inch diameter reinforced lock-joint concrete pipe siphon under Trifolium Storm Drain channel.

(4) Vail Canal:

- a. Replacement of check at Lateral 6 Heading with two-bay concrete check.
- b. Replacement of Reed Lateral 15 Heading with concrete structure.
- c. Construction of Vail Canal - Alamo River crossing above the North End Dam to supply water to Vail Canal from East Highline Canal laterals, Nutmeg, Nectarine, and "B" laterals, required:
 - 1 - Crossing under Alamo River channel with triple-barrel 48-inch diameter, lock-joint reinforced concrete pipe 280 feet in length with concrete transitions on intake and outlet.
 - 2 - Construction of 1.12 miles of an extension on the Nutmeg Lateral Canal to Alamo River crossing.
 - 3 - Construction of double-barrel 48-inch diameter siphon road crossing for connection on the Nectarine and "B" Lateral Canals to Alamo River crossing.

(4) Vail Canal: (Continued)

- 4 - Construction of .60 of a mile of an extension on "B" Lateral Canal, extending south to Nectarine Lateral Canal.
- 5 - Construct concrete check and turnout in "B" Lateral Canal to serve the extension to Vail Canal.
- 6 - Construction of 36" x 96' reinforced concrete pipe siphon from the Nectarine Drain crossing under the new channel to Alamo River crossing.
- 7 - Construction of .60 of a mile of new channel from Alamo River crossing to the Vail Canal.
- 8 - Construction of triple-barrel 48-inch diameter concrete drop and road crossing on channel to Vail Canal.
- 9 - Construction of four-bay concrete control structure in the Vail Main Canal below inlet of channel from the East Highline Canal laterals.
- 10 - Construction of combination control structure and road crossing on the Rockwood Canal connection to the Vail Canal.
- 11 - Construction of 24" x 80' reinforced concrete pipe siphon crossing under the new Vail Canal connection channel for an outlet to Alamo River for private drain and the Rockwood Drain when constructed.

(5) County Road Structures:

There were 165 County road structures constructed under co-operative agreement with the Imperial County Road Department, on the replacement and construction of County Road structures crossing District facilities.

(c) Divisions:

The construction work in the divisions consisted of the replacement and construction of lateral canal checks, delivery gates, control drops, bridges, and siphons.

Special designed portable steel concrete forms were used on this work and only structures for which the forms were not available were constructed of wood or rubble masonry.

	<u>Wood</u>	<u>Concrete</u>	<u>Rubble</u>	<u>Total</u>
<u>Delivery Gates</u>				
New	2	22	4	28
Replaced	19	236	19	274
<u>Checks</u>				
New	1	6	2	9
Replaced	8	138	13	159
<u>Bridges</u>				
New	4	-	-	4
Replaced	16	5	1	22
<u>Siphons</u>				
New	-	3	-	3
Replaced	3	7	-	10
<u>Drops</u>				
New	-	14	1	15
Replaced	-	9	-	9
<u>Spillways</u>				
New	-	-	2	2
Replaced	-	<u>1</u>	<u>1</u>	<u>2</u>
Totals	53	441	43	537

(d) Brush and Weed Control:

The expenditure on brush and weed control work was \$360,074, compared to \$395,517 for year 1948.

The results obtained on experimental work with aromatic oil and 2-4-D on brush and weed control work during 1947-1948 seasons resulted in an increase in the use of aromatic oil and 2-4-D on control work during 1949, which permitted reduction on burning operations.

The expenditure on burning operations was \$148,681, compared to \$318,793 for 1948. This required 21,567 man-hours on 8,349 miles and using 798,078 gallons of oil, compared to 54,157 man-hours, 24,671 miles, and 1,827,876 gallons of oil for year 1948.

The expenditure on 2-4-D was \$40,798, compared to \$13,613 for year 1948. This required 8,870 man-hours on 1,054 miles and 13,361 pounds of chemical on channel maintenance, and 797 acres on right-of-way work, using 5,775 pounds of chemical.

The expenditure on aromatic oil was \$111,474, compared to \$4,100 for year 1948. This required 13,549 man-hours on 4,345 miles and using 396,356 gallons of oil on channel maintenance, and 653 acres on right-of-way work, using 79,025 gallons of oil.

The total miles on weed control work with burning, 2-4-D, and aromatic oil being 13,748 miles, and 1,450 acres, compared to 24,671 miles burned in 1948.

The expenditure on the removal of debris was \$8,766, compared to \$12,298 for year 1948.

Control work on noxious weeds required 480 gallons of aromatic oil, 7.50 pounds of 2-4-D, 175 pounds of atlacide, and 357 man-hours.

(e) Seepage Control:

The expenditure on seepage control was \$24,555, compared to \$33,400 for year 1948. There were 26,765 gallons of oil used on 13 locations, consisting of 9,740 lineal feet. There were 45 locations machine cored and compacted, consisting of 49,274 lineal feet.

(f) Moss Control:

The expenditure on moss control was \$48,378, compared to \$42,950 for year 1948.

The area affected by moss growth on the canal and drain channels continued to increase as activity on erosion decreased.

On chemical control work, 326 miles were treated, requiring 40,573 gallons of chemical and 2,428 man-hours, compared to 253 miles, 20,955 gallons of chemical, and 1,981 man-hours for 1948.

On hand work, 8,569 man-hours were required, compared to 7,416 man-hours for year 1948.

On burning work, 92 miles were burned, requiring 15,580 gallons of oil and 311 man-hours. In addition to the burning, there were 510 miles sprayed with 43,366 gallons of aromatic oil, requiring 1,697 man-hours, compared to 774 miles, 81,720 gallons of oil burned, requiring 2,120 man-hours, in 1948.

(g) Emergency Operations:

No emergencies occurred during the year of sufficient importance to require expenditure of emergency funds.

III. DRAIN CONSTRUCTION, MAINTENANCE, AND IMPROVEMENTS

(a) General:

The protection afforded the District by Public Water Reserves 90 and 114, which withdrew from entry the public lands under the 230 contour, for the purpose of creating a reservoir in Salton Sea for storage of waste and seepage water from irrigated land in Imperial Valley, was seriously threatened by exchange applications involving these reserves filed by the State of California, on behalf of various individuals. Protests against revocation of the reserves were filed with the Department of the Interior and our representatives in the U. S. Congress, and the State Legislature was alerted to the danger of infringement on the reserves.

(b) Construction:

The construction of District-maintained drains was continued on the co-operative plan as in former years, the landowners supplying the right of way and contributing \$800.00 per mile toward construction cost, plus the material required for standard field outlets into District drains, the District bearing all remaining cost to complete construction and installation of field outlet pipes. The expenditure on Special Drainage Construction was \$387,976, compared to \$451,063 for the year 1948.

On new construction, 5.62 miles of main drains and 9.58 miles of lateral drains were constructed. On reconstruction work, 18.31 miles of main drains and 31.82 miles of lateral drains were reconstructed, making a total of 65.33 miles of construction and reconstruction work by the District.

In addition to the work performed by the District, private contractors constructed 13.47 miles of new farm drains and cleaned 54.37 miles of existing farm drains.

Private contractors installed 456 miles of farm tile drains, the engineering and inspection work during installation being taken care of by the District.

The total miles of open drains and tile drains constructed or maintained by the District and private contractors, for the year 1949, were as follows:

1. Miles of new open drains constructed by District	15.20
2. Miles of existing open drains reconstructed by District	50.13
3. Miles of new open drains constructed by Contractors	13.47
4. Miles of existing open drains cleaned by Contractors	54.37
5. Miles of farm tile drains installed by Contractors	456.00

making a total of 589.17 miles of drain channels constructed, improved and tiled during the year.

The record on the total mileage of District-maintained drains and privately maintained farm tile drains in the District, as of December 31, 1949, is as follows:

a. Miles of District Main Drains	532
b. Miles of District Lateral Drains	<u>802</u>
c. Total Miles of District Drains	1 334
d. Total Miles of Farm Tile Drains	<u>1 959</u>
e. Total Miles of Drain Channels in District	3 293*

*Does not include privately maintained open ranch drains.

(c) Operation and Maintenance of Main Drains:

The expenditure on the operation and maintenance of the main drains and drain outlets was \$202,119, compared to \$215,341 for year 1948.

Burning operations were continued on the control of the drain channels, burning 2,043 miles, requiring 243,515 gallons of oil and 6,364 man-hours, compared to 4,096 miles burned, 387,374 gallons of oil, and 11,147 man-hours for year 1948. In addition to burning operations during 1949, 527 miles were sprayed, using 36,105 gallons of aromatic oil and 1,794 man-hours.

On chemical moss-control work, 169 miles were treated, requiring 31,238 gallons of chemical and 1,554 man-hours, compared to 130 miles treated, 13,708 gallons of chemical, and 1,181 man-hours for year 1948.

On hand work, 1,266 man-hours were spent, compared to 1,620 man-hours for year 1948.

On the maintenance of drain structures, 45 flumes were repaired and one replaced; 38 bridges were repaired and 15 replaced; 11 siphons were repaired, one replaced, and 3 extended; 3 field waste pipes were repaired and 22 were replaced; the total man-hours required on structure maintenance being 6,315.

There were 65 miles of machine cleaning required, 173 miles of grading, and 11,585 man-hours on channel training.

On the drainage construction and reconstruction work, 109 siphons were installed, requiring 7,753 lineal feet of pipe.

There were installed 155 field waste pipes, requiring 7,092 lineal feet of pipe; 102 miles of right of way graded; and 11 miles of fence moved.

The total lineal feet of pipe installed by drainage maintenance and construction is as follows:

Transite pipe installed	549 lineal feet
Reinforced concrete	26 466 lineal feet
Corrugated iron	530 lineal feet
Miscellaneous	<u>192</u> lineal feet

Total lineal feet for year 1949	27 737
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IV. POWER DIVISION

(a) Construction and Improvements:

1. 1943 Power Development Program:

Receipt of transformers and oil circuit breakers on order under contracts of this program, and completion of their installation marked the final step in closing all phases of this program.

2. 1945 Power Development Program:

One of the most important additions to the District's power system under this program was the completion of the 20,000-kw steam-electric generating plant at El Centro. Of the latest design and utilizing the best equipment available, this new plant was formally inaugurated for service April 25, 1949, and will be in continuous service for several years, until development of other power sources make it possible to use this plant for quick-pickup stand-by service. The plant is designed to operate on either oil or gas, or a combination of both, and is of the type being constructed by many electric utilities throughout the United States, in an effort to keep up with the tremendous increase in power demand. The plant is operated by a force of 14 on a 24-hour basis. Total cost of the installation, including the necessary water-treatment plant and water-cooling facilities, was \$4,112,897.00, which was set up in the 1945 Power Development Program.

Completion of the El Centro-Coachella transmission line, another project set up under the 1945 Power Development Program, was also accomplished in 1949. This line not only makes it possible to transmit more efficiently power to the Coachella area, but enables the District in case of emergency, or in case the demand exceeds local available sources of supply, to receive power from the California Electric Power Company for use

in the Imperial Valley system. Total cost of this feature of the program was \$1,015,056.00.

In connection with the use of the El Centro Steam-Electric Generating Station and the El Centro-Coachella Line, another feature of the 1945 Power Development Program, the El Centro Switching Station was completed in 1949. The addition of this switching station makes it possible to receive power from various sources of supply, and then transmit it to any other area in the District. Total cost of this installation was \$361,684.00.

At the end of the year, work was well under way on the final phase of the 1945 Power Development Program, which is the installation of Unit No. 2 at the Hydro Plant at Drop No. 4 on the All-American Canal. Capable of generating 9,600 kw, this unit will furnish much needed power for the District's constantly expanding system. Completion of this unit is scheduled for June, 1950, and total cost is expected to be ~~\$380,000.00~~. *W. H. ...*

3. 1949 Power Development Program:

On June 15, 1949, the voters of Imperial Irrigation District authorized the tenth issue of Electric Revenue Bonds in the amount of \$12,500,000.00, which will be used to construct a second unit at the El Centro Steam Plant with a generating capacity of 30,000 kw, a 9,600-kw Hydro Plant at Drop No. 2 on the All-American Canal, and the necessary facilities to deliver the additional power to the consumers.

The first contract under this program was awarded on October 16, 1949, for the furnishing of the steam turbine-generator unit for the second unit at the El Centro Plant. Other contracts awarded during 1949 included the cooling tower, the condenser and water-treating equipment, and power transformers for the substation.

4. Electric Plant in Service:

Additions and betterments to the electric plant in service, paid for from revenue funds, amounted to \$736,074.00 for the year. This amount was distributed as follows: generating facilities, \$20,882.00; transmission plant, \$71,156.00; distribution plant, \$609,522.00; and general plant, \$34,514.00. Retirements from electric plant for the year amounted to \$173,466.00. Of this, material in the amount of \$85,442.00 was returned to stock to be reissued and \$22,700.00 was sold as salvage.

(b) Operation and Maintenance:

Operations at the Brawley Diesel Plant were curtailed the latter part of the year, as a result of the Steam-Electric Generating Plant at El Centro going into operation in April, 1949, thus allowing time for maintenance which had been delayed due to the increased demand for power, which had made it necessary to operate the Diesel Plant without interruption for some time.

Maintenance of transmission and distribution facilities were carried on throughout the year, and very few power outages were charged to the mechanical failure of these facilities.

(c) Power Sales:

The rapid growth of the power market continued throughout 1949. A total of 1,543 new consumers was added to the District's lines, bringing the total consumers to 25,554 at the end of the year.

Revenue from sales of electric energy increased to \$4,143,182, which is an all-time high for receipts from the power system.

Growth of the District's power system since operations began in May, 1936, is as follows:

<u>Year</u>	<u>Customers</u>	<u>Sales In Kilowatt-Hours</u>	<u>Sales In Dollars</u>
(a) 1936	1 219	1 939 000	\$ 52 296 00
1937	1 432	5 396 000	140 250 00
1938	3 040	7 186 000	174 521 00
1939	8 568	19 331 000	510 514 00
1940	10 228	26 828 000	708 019 00
1941	11 290	32 605 000	801 369 00
1942	11 262	37 182 000	881 912 00
(b) 1943	18 560	63 604 000	1 153 832 00
1944	18 684	109 186 000	2 128 466 00
1945	19 018	128 176 000	2 413 235 00
1946	20 453	138 904 000	2 688 326 00
1947	22 374	153 253 000	3 057 296 00
1948	24 138	188 615 000	3 572 018 00
1949	25 554	245 128 000	4 143 182 00

(a) Operations commenced in May, 1936.

(b) Properties of California Electric Power Company acquired October 15, 1943.

Comparative sales data for the years 1948 and 1949 indicating kilowatt-hour consumption, and revenue realized from the various classes of service, are given in the following tabulations:

KILOWATT-HOUR SALES

<u>Type of Service</u>	<u>1948</u>	<u>1949</u>
Residential	50 354 790	59 764 247
Commercial	32 914 693	42 770 237
Industrial	44 746 776	52 024 214
Agricultural	36 503 980	37 634 368
Public Authorities	10 931 587	4 613 085
Interdepartmental	2 085 799	1 965 280
Street and Highways	487 886	526 592
Other Utilities	<u>10 589 960</u>	<u>45 830 535</u>
Total	188 615 471	245 128 558

REVENUE

<u>Type of Service</u>	<u>1948</u>	<u>1949</u>
Residential	\$1 315 023 84	\$1 503 176 44
Commercial	863 226 71	1 055 580 42
Industrial	580 167 56	652 902 12
Agricultural	456 264 33	474 921 36
Public Authorities	184 236 50	56 354 26
Interdepartmental	40 484 85	40 273 44
Street and Highways	20 100 87	21 315 79
Other Utilities	<u>112 514 08</u>	<u>338 652 44</u>
Total	\$3 572 018 74	\$4 143 182 08

In order to better educate the public in the use of the latest electrical appliances, a series of cooking schools were conducted throughout the Valley, with a popular home economist demonstrating the latest methods of cooking electrically. Electric appliance dealers, throughout the Valley, displayed the latest in electrical appliances at each show.

On November 9, 1949, negotiations were instituted to draft a contract for the United States to sell Davis Dam power to Imperial Irrigation District, pursuant to the allocation of June 3, 1949. It is anticipated that power from this source will be delivered to the District sometime in 1951.

V. LEGAL DEPARTMENT

(a) State Legislation:

Perusal of several thousand bills introduced in the 1949 State Legislature disclosed some 135 of vital interest to the District. This required extensive activity on the part of the District in support, opposition, or compromise, as the District's interests were affected, by each separate piece of proposed legislation.

A. B. 3097, a ground water adjudication bill, was carried over by the 1949 session and is under detailed study, with a view of offering substitute legislation. The need for a ground water code has been aggravated by the decision handed down by the Supreme Court on June 3, 1949, in the case of Pasadena versus Alhambra. In effect, this decision established that the rights in a specific basin had become adverse and exceeded the supply; then adjudicated the rights by prorating the supply among all legally established rights, appropriative and prescriptive. This left no supply for any nonusers whose rights had not been fully established and protected.

(b) Court Cases:

The District was successfully defended against the \$345,000 Holmestake Mining suit which was on trial in Superior Court in El Centro from October 24, 1949, to December 9, 1949.

The District's suit against Riverside County for refund of taxes on property outside the boundaries of the District, scheduled for hearing before the Fourth Appellate Court, Fresno, on December 13, 1949, was postponed and tentatively reset for February, 1950. This case seeks to establish the constitutionality of the act limiting to 1947 retroactive taxation of property

outside the boundaries of a district, and to repudiate the dictum of the court in the Rock Creek case which defined irrigation districts as municipal corporations.

During 1949, two condemnation actions were commenced, one for power transmission lines in San Diego County, the other for a drainage canal within the District. Work on the several condemnation actions, incident to the new transmission line into the Coachella service area, has also continued with promise that these actions can be completed soon.

Fifteen authorizations to quiet title to land within the District were transmitted to this department by the Secretary in 1949. Fifty-six such actions, previously commenced, were completed. At present, of thirty-nine pending, only ten appear to involve difficult matters above and beyond the routine processing of such cases.

The year 1949 saw an upturn in the District's encounters with delinquent power accounts. Seventeen suits were filed to collect such accounts. Of these, five have been successfully closed, and four others have entered into agreements to liquidate the indebtedness by installment payments. The majority of those remaining involve inability to find the defendant and the want of assets upon which to levy execution.

Several pole and power-line damage cases are still pending, but the case against the La Salle Trucking Company, involving damage to District mobile equipment, was favorably settled.

(c) Bond Issues:

Counsel for the District guided the Board of Directors through the proceedings relative to the issue of \$12,500,000 and the sale of the \$6,000,000 first division of the tenth issue of bonds, and rendered an opinion concerning the legality of the proceedings and the form of the bonds.

VI. ALL-AMERICAN CANAL

(a) Federal Contracts:

The District's proposal of December 1, 1947, relating to the operation of the All-American Canal subject to the Mexican Treaty remained under consideration in the office of the Secretary of State throughout 1949. On August 4, 1949, the District was advised that the proposal had been approved in principal, and that consideration was being given to clarifying amendments. On September 1, 1949, the Department of State wrote to the effect that the Secretary of the Interior and several members of the Senate had raised important questions which had not yet been determined. Throughout the year, the District has been in frequent contact with State, Interior, and Justice Department representatives, officials of the International Boundary and Water Commission, and members of Congress for the purpose of supporting the District's position, and to answer opposition to the proposal. A formal memorandum dealing with American-Mexican Treaty Administration and its relation to Imperial Irrigation District's operation of Imperial Dam, the All-American Canal from Imperial Dam to and including Pilot Knob check and wasteway and a power plant at Pilot Knob, was submitted to the State Department, the Department of the Interior, the Justice Department, and the International Boundary and Water Commission on December 20, 1949.

A proposal by the District to accept the common section of the Coachella Canal as complete upon the installation of certain checks and bridges if the Secretary of the Interior would grant to the District the right to install turnouts at locations, of capacities, and at such time or times as the District elects, was stalemated on March 25, 1949, when the Secretary of the Interior replied that he did not contemplate that any lands on East Mesa would be opened to reclamation homestead entry and settlement, and, therefore, he could not

approve the construction of canal turnouts designed to serve these lands. In support of his decision, Secretary Krug offered an opinion by the Solicitor of the Department of the Interior. In a memorandum opinion subsequently written, Counsel for the District held that the determination concerning East Mesa lands made by Secretary of the Interior Wilbur in 1932 became final once taken, and is not subject to redetermination by the Secretary.

On August 18, 1949, the District invited the attention of the Secretary of the Interior to the liability of the Gila Project to pay a proportionate part of \$1,600,000 of the cost of Laguna Dam in accordance with the terms of the District's contract of December 1, 1932. The entire \$1,600,000 has already been paid to the United States and payment by the Gila Project would be in the nature of a refund to Imperial Irrigation District, Coachella Valley County Water District, and the City of San Diego. At the Bureau's request, discussion of this matter was suspended pending a government field survey of financial conditions pertaining to the All-American Canal and Gila Projects.

A basis for allocation of operation and maintenance charges on the All-American Canal between Pilot Knob and West Side Main was worked out between the affected agencies, the City of San Diego, the Coachella Valley County Water District, and Imperial Irrigation District. Pursuant to this agreement, on November 2, 1949, the District billed the City of San Diego and the Coachella Valley County Water District for their respective shares of the estimated 1950 charges.

VII. EAST MESA

(a) Farm No. 1:

Eady Brothers Farming Company of Calexico continued to operate Farm No. 1 under the provisions of their lease with the District.

Crops now growing include alfalfa and flax. Yields from that portion of the farm in alfalfa compared favorably with yields obtained elsewhere in Imperial Valley, both for hay and for seed. Results from the flax crop will not be available until harvest in 1950.

(b) Farm No. 2:

All units of Farm No. 2, except units 7 and 11, were under cultivation during 1949.

An underground pipe line was installed as part of a sprinkler system to operate on units 5 and 6, and pump outlets were installed to serve as part of a sprinkler system to serve units 3 and 4 and units 8 and 12. A portable pump and the necessary pipe and valves complete the sprinkler system which will serve these units. A definite saving of water will be effected by use of this system; however, definite comparisons on the use of water and of the crops harvested cannot be made at this time.

During the year, crops were harvested from units 1, 2, 4, 5, 9, 10, 13, and 14, and some income was derived from pasturing cattle on units 9, 10, 13, and 14.

Crops planted during the year include alfalfa, barley, sudan, oats, and sesbania. Valuable data on the quantity of seed to use, the time of year to plant, and the quantity of water required has been compiled, and will be available when the area is opened for settlement by veterans.

During the year, various civic groups and American Legion representatives visited the farm to observe the progress being made. The American Legion is continuing their efforts to obtain permission to open the East Mesa lands for settlement by veterans.

VIII. NORTH END IMPROVEMENT PLAN

The revamping of the water facilities to serve the Vail System, which serves more than 25,000 acres of rich farm lands in an area west of the Alamo River and north of New River, was completed September 16, 1949.

Originally, water for the Vail Canal system had been diverted from the North End Dam in the Alamo River two miles south and two miles west of Calipatria. However, increased installation of tile in the area drained by the Alamo resulted in greater salt content of the river waters. The project was designed to decrease the salt content of the water used in irrigating that district. To accomplish that purpose and to provide better quality of irrigating water for the Vail area, the District Engineer prepared the plans for three siphons, two canal drop structures, four canal checks, and several other miscellaneous small structures and a realignment of the Alamo River channel for a distance of a half mile, as the first phase of this project.

A major siphon was installed 1-1/2 miles south and 2 miles west of Calipatria. Built of reinforced concrete, it has 3 barrels which carry irrigating water from the District lateral canals 22 feet below the surface of the Alamo River and into the Vail Canal.

The Alamo River siphon has an over-all length of 311 feet, and an ultimate capacity of 325 cubic feet of water per second.

The total cost of the project was \$96,961.00.

IX. COLORADO RIVER BOARD

California's comments on the Central Arizona Project report, which was summarized in the 1948 report, were filed with the Secretary of the Interior at the beginning of the year. A revised litigation resolution to determine the water rights of the states of the Lower Basin of the Colorado River was introduced in the 81st Congress. The Central Arizona Project was introduced in the 81st Congress as S. 75 in the United States Senate, and as H. R. 935 in the House of Representatives.

The Chief Engineer of the Colorado River Board and the Assistant Attorney General, assisted by representatives of the various agencies of the Colorado River Board, opposed S. 75 before the Senate Interior and Insular Affairs Committee in long drawn out hearings. The Colorado River Board supported before the same committee the litigation resolution. California was vigorously opposed by Arizona and personnel of the Interior Department.

S. 75 was passed August 3 with an amendment attached which provides that no money can be spent on irrigation works under the bill until the question of water rights is determined, provided the issue is raised within six months after the bill becomes a law. The committee, however, requested a report from the Bureau of the Budget and the Department of Justice on the amended bill, which had not been rendered at the time of writing this report.

The companion bill, H. R. 934, was still in committee when Congress recessed and will be brought up when Congress reconvenes in 1950.

Congress also ratified the Colorado River Upper Basin Compact after the Colorado River Board of California succeeded in having the ratification bill amended by adding Section 21, containing the following language: "Nothing in this Act nor in said Compact should be deemed to amend nor affect the meaning of the Colorado River Compact nor the Boulder Canyon Project Act by which the

Colorado River Compact was approved, nor to affect nor impair interest of any state which is not a party to the Upper Colorado River Basin Compact."

A bill identified as H. R. 1770 was introduced by Congressman Murdock of Arizona and supported by National Reclamation Association and the Secretary of the Interior. This bill, which would extend the time of repayment on construction contracts to an unlimited period and make it possible for such projects as the Central Arizona Project to qualify, was opposed by the Colorado River Board, and we believe that when the public becomes aware of the socialistic purposes of such legislation we will not only be able to defeat this bill, but force the Interior Department to adopt policies and accept legislation compatible with a free enterprise way of life.

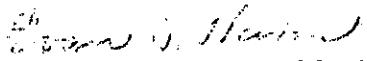
The Colorado River Board was represented at the National Water Conference in Chicago September 22, and at the National Reclamation Association in Salt Lake City on November 2. We appear to be making progress and selling a more sane and practical type of reclamation law.

A great amount of educational work was carried on throughout the year by representatives of the Colorado River Board in showing the people of the nation the tremendous tax load with which they would be burdened if the Central Arizona Project bill passed. As a part of this educational work the Colorado River Association, in co-operation with the Colorado River Board, conducted several tours of the Colorado River Basin with newspaper representatives and members of Congress. The Colorado River Association, in carrying on its educational activities to acquaint the people of the United States with the facts involved in this fantastic Arizona Project, have directed their campaign specifically to trying to get articles along this line accepted by national magazines. They have continued their mail distribution campaign to state legislators, bankers, Farm Bureau and Grange officials, and publishers of daily and weekly newspapers in the east, middle west and south, furnishing a series of maps and newspaper articles.

X. CONCLUSION

This brief summary of the District's operations would not be complete without giving full credit to the officers and employees of the District for their loyal support and co-operation in making the year 1949 most successful.

To the people of the Valley, who are the District, I wish to express my thanks for their continued co-operation and confidence.


EVAN T. HEWES, President
Board of Directors